

SUPPLEMENTARY FIGURES FOR:

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

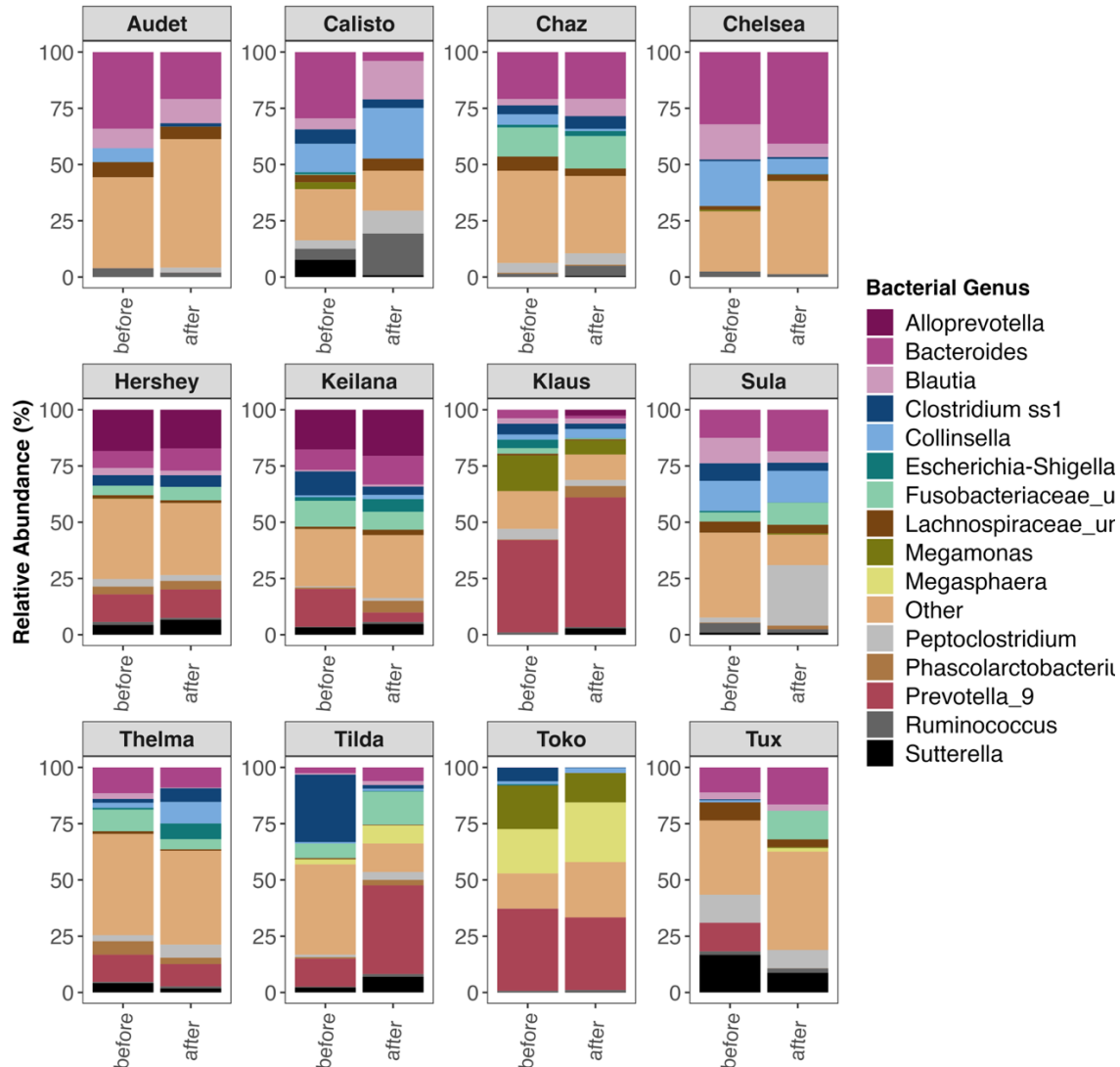
Connie A. Rojas^{1,2}, Zhandra Entrolezo³, Jessica Jarett³, Guillaume Jospin³, Dawn Kingsbury³, Alex Martin³, Jonathan A. Eisen^{1,2}, Holly H. Ganz³

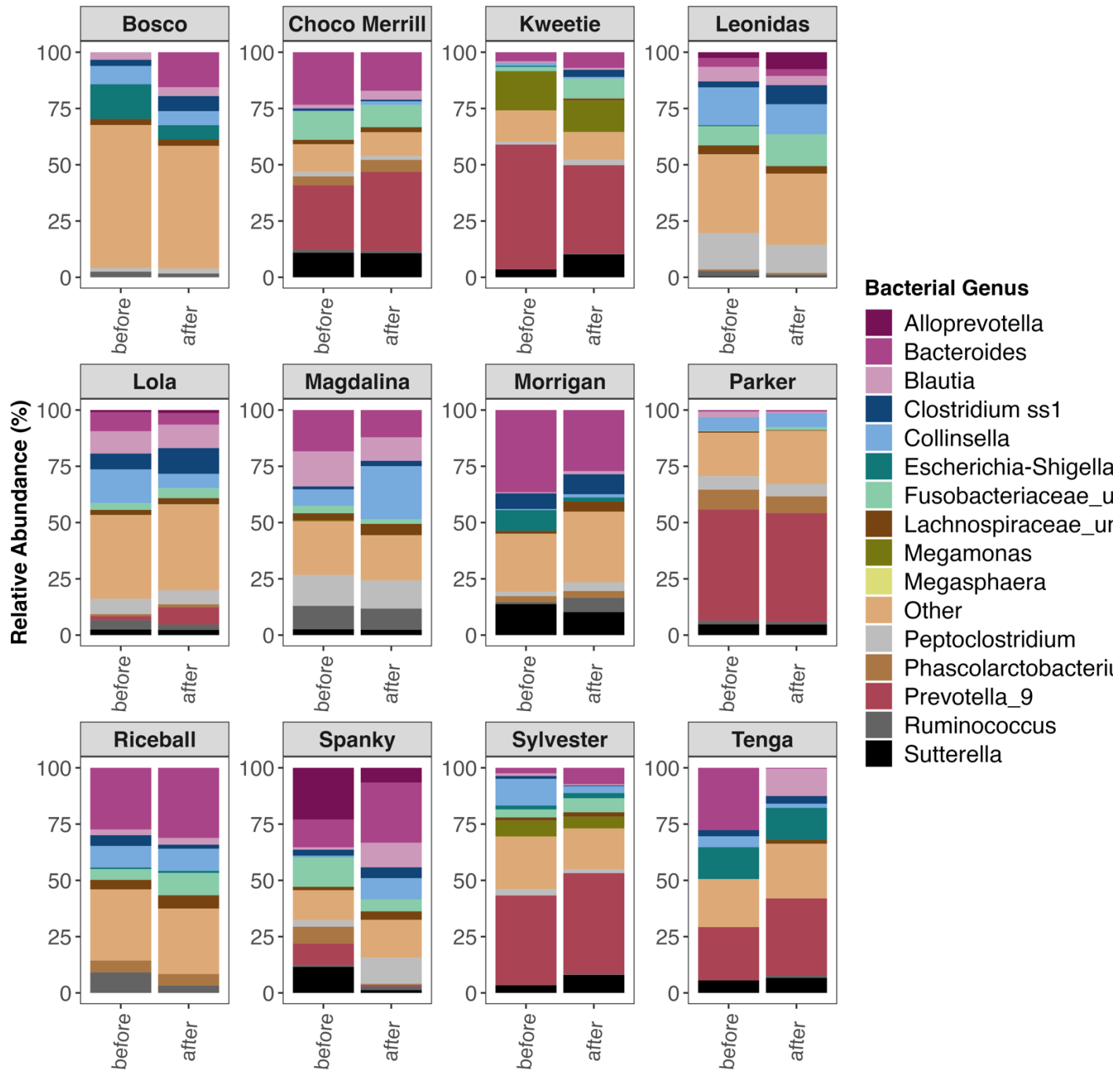
¹ Genome Center, University of California – Davis, Davis, California, USA

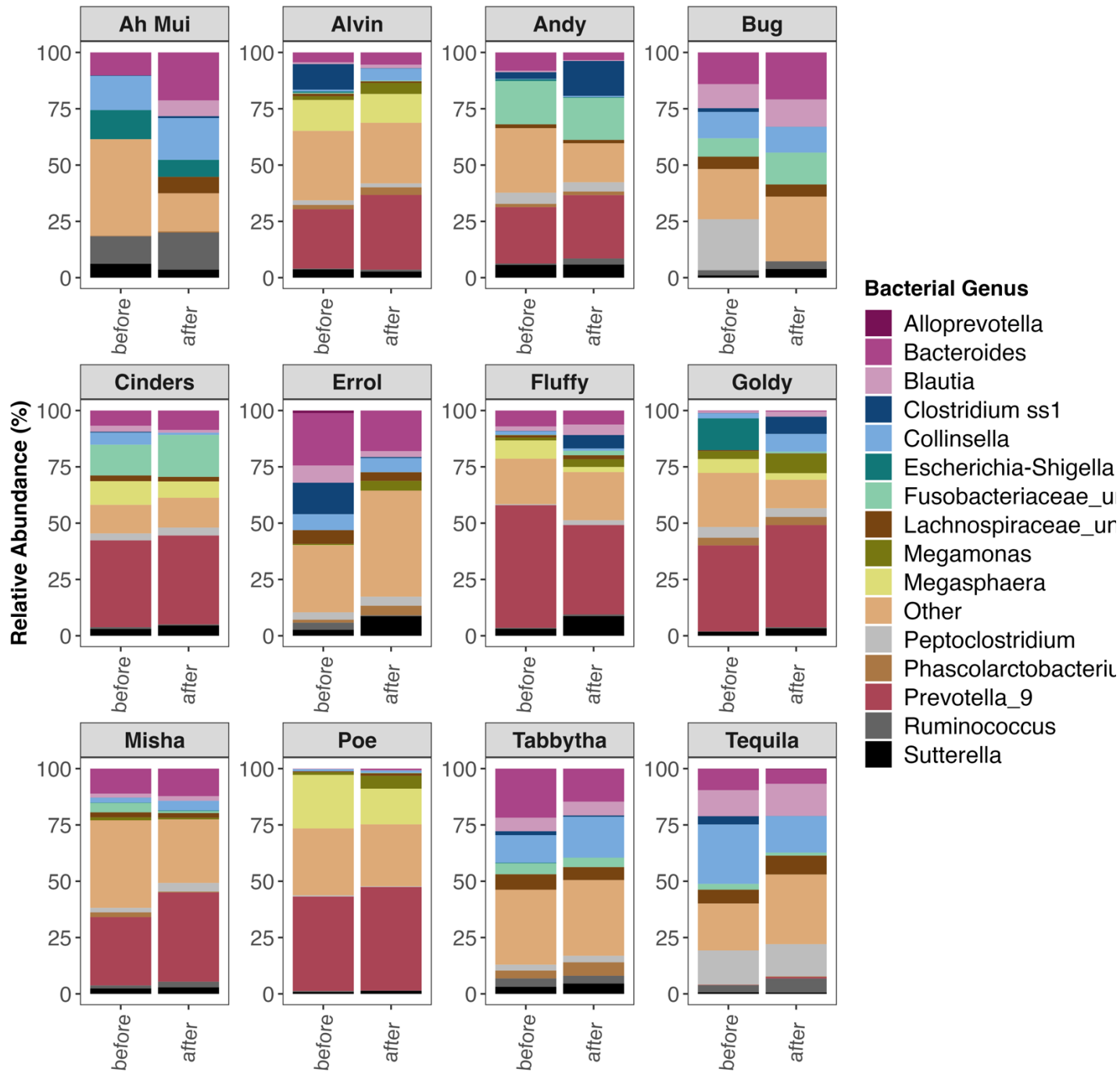
² Department of Evolution and Ecology, University of California – Davis, Davis, California, USA

³ AnimalBiome, Oakland, CA, USA

Fig S1. Fecal microbiome composition before and after FMT for the forty-six FMT recipients. Plots showing the relative frequencies of 16S rRNA gene sequences assigned to bacterial genera with mean relative abundances > 1.65%, while all other genera are clumped into an “Other” category.







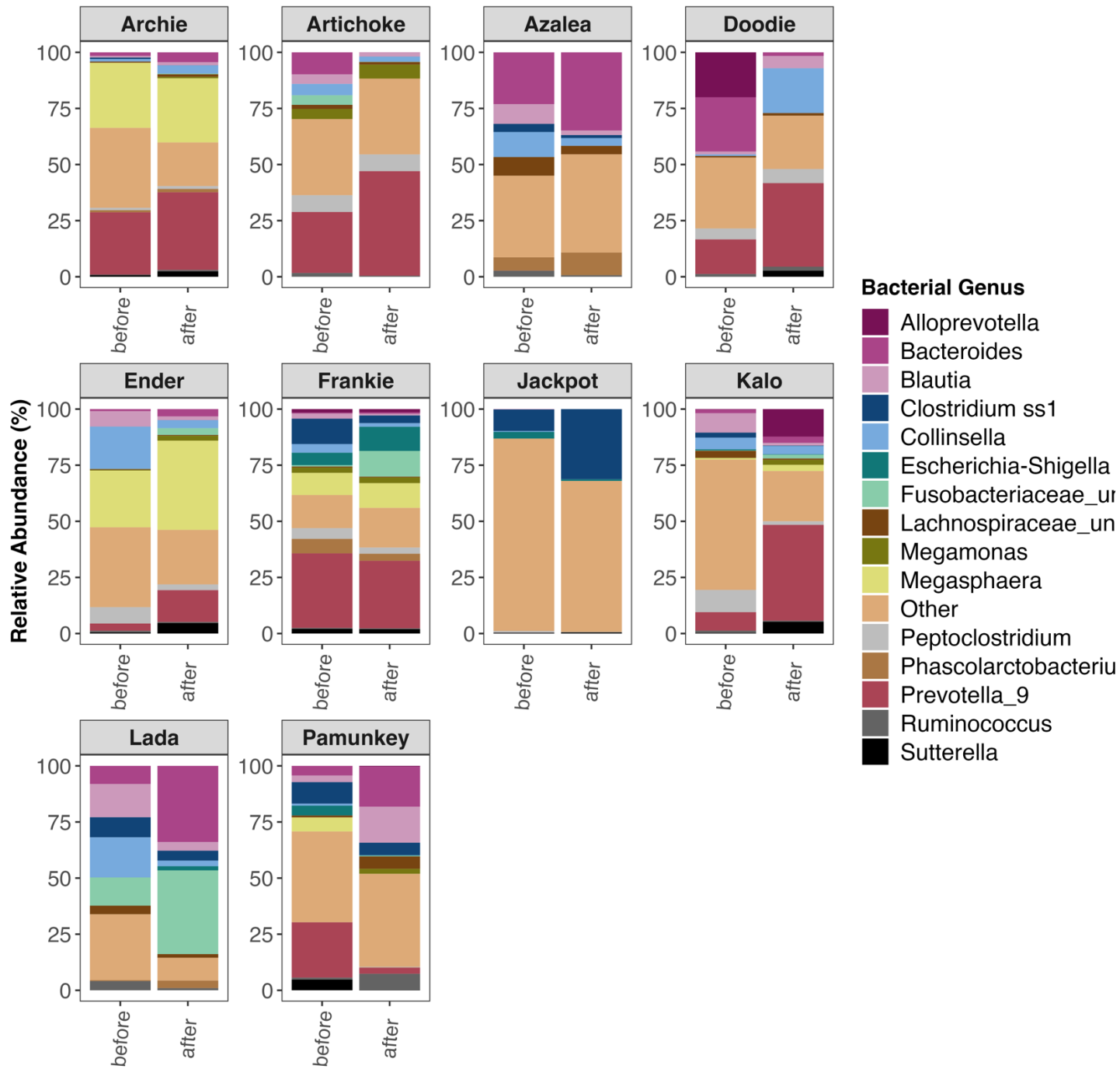


Fig S2. Posthoc testing of bacterial genera that were found to significantly correlate with host predictors according to a linear model. A-D) Posthoc testing of bacterial relative abundances ~ clinical symptoms, E-G) Posthoc testing of bacterial relative abundances ~ response to FMT, H) Posthoc testing of bacterial relative abundances ~ prior antibiotic use, and I) Posthoc testing of bacterial relative abundances ~ Dry kibble consumption. Tukey contrasts were used.

A) GLM Δ Relative Abundance of Clostridium ~ Clinical signs

Linear Hypotheses:				
	Estimate	Std. Error	z value	Pr(> z)
Diarrhea - Constipation == 0	-0.8888	2.9916	-0.297	0.9905
VomConstip - Constipation == 0	-4.6916	4.2027	-1.116	0.6709
VomDiarr - Constipation == 0	4.6072	3.1022	1.485	0.4362
VomConstip - Diarrhea == 0	-3.8027	3.7594	-1.012	0.7352
VomDiarr - Diarrhea == 0	5.4960	2.3325	2.356	0.0816 .
VomDiarr - VomConstip == 0	9.2987	3.9539	2.352	0.0825 .

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 signs

Linear Hypotheses:				
	Estimate	Std. Error	z value	Pr(> z)
Diarrhea - Constipation == 0	-4.349	2.899	-1.500	0.4271
VomConstip - Constipation == 0	-7.245	4.072	-1.779	0.2743
VomDiarr - Constipation == 0	-8.457	3.006	-2.813	0.0237 *
VomConstip - Diarrhea == 0	-2.896	3.643	-0.795	0.8519
VomDiarr - Diarrhea == 0	-4.109	2.260	-1.818	0.2562
VomDiarr - VomConstip == 0	-1.212	3.831	-0.316	0.9886

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 signs

Linear Hypotheses:

	Estimate	Std. Error	z value	Pr(> z)
Diarrhea - Constipation == 0	-0.4215	0.7521	-0.560	0.94157
VomConstip - Constipation == 0	2.4778	1.0565	2.345	0.08423 .
VomDiarr - Constipation == 0	-0.8434	0.7799	-1.082	0.69261
VomConstip - Diarrhea == 0	2.8993	0.9451	3.068	0.01104 *
VomDiarr - Diarrhea == 0	-0.4219	0.5864	-0.720	0.88547
VomDiarr - VomConstip == 0	-3.3212	0.9940	-3.341	0.00481 **

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 *Subdoligranulum* ~ Clinical signs

Linear Hypotheses:

	Estimate	Std. Error	z value	Pr(> z)
Diarrhea - Constipation == 0	0.3531	0.6903	0.511	0.95471
VomConstip - Constipation == 0	-2.2919	0.9698	-2.363	0.08036 .
VomDiarr - Constipation == 0	0.6407	0.7159	0.895	0.80131
VomConstip - Diarrhea == 0	-2.6450	0.8675	-3.049	0.01167 *
VomDiarr - Diarrhea == 0	0.2876	0.5382	0.534	0.94883
VomDiarr - VomConstip == 0	2.9326	0.9124	3.214	0.00687 **

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

(Adjusted p values reported -- single-step method)

E) GLM Δ Relative Abundance of *Butyricoccus* ~ Response to FMT

Linear Hypotheses:

	Estimate	Std. Error	z value	Pr(> z)
Responder - Non-Responder == 0	-0.10298	0.05364	-1.92	0.0549 .

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

(Adjusted p values reported -- single-step method)

F) GLM Δ Relative Abundance of Megamonas ~ Response to FMT

Linear Hypotheses:

	Estimate	Std. Error	z value	Pr(> z)
Responder - Non-Responder == 0	2.108	0.782	2.696	0.00702 **

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

(Adjusted p values reported -- single-step method)

G) GLM Δ Relative Abundance of Peptococcus ~ Response to FMT

Linear Hypotheses:

	Estimate	Std. Error	z value	Pr(> z)
Responder - Non-Responder == 0	-0.3941	0.1572	-2.506	0.0122 *

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

(Adjusted p values reported -- single-step method)

H) GLM Δ Relative Abundance of Ruminococcus ~ Response to FMT

Linear Hypotheses:

	Estimate	Std. Error	z value	Pr(> z)
Responder - Non-Responder == 0	-2.1334	0.9945	-2.145	0.0319 *

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 Negativibacillus ~ Prior antibiotic use

Linear Hypotheses:

	Estimate	Std. Error	z value	Pr(> z)
Yes - No == 0	-1.0947	0.5276	-2.075	0.038 *

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

(Adjusted p values reported -- single-step method)

J) GLM Δ Relative Abundance of Peptoclostridium ~ diet (dry kibble consumption)

Linear Hypotheses:

	Estimate	Std. Error	z value	Pr(> z)
Yes - No == 0	-3.470	1.834	-1.892	0.0585 .

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

K) GLM Δ Relative Abundance of Subdoligranulum ~ diet (dry kibble consumption)

Linear Hypotheses:

	Estimate	Std. Error	z value	Pr(> z)
Yes - No == 0	-1.1032	0.5046	-2.186	0.0288 *

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

L) GLM Δ Relative Abundance of Desulfovibrio ~ clinical signs

Linear Hypotheses:

	Estimate	Std. Error	z value	Pr(> z)
Diarrhea - Constipation == 0	-0.13716	0.36311	-0.378	0.98091
VomConstip - Constipation == 0	1.43156	0.51011	2.806	0.02418 *
VomDiarr - Constipation == 0	-0.18558	0.37654	-0.493	0.95920
VomConstip - Diarrhea == 0	1.56872	0.45631	3.438	0.00315 **
VomDiarr - Diarrhea == 0	-0.04842	0.28311	-0.171	0.99815
VomDiarr - VomConstip == 0	-1.61714	0.47991	-3.370	0.00384 **

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

M) GLM Δ Relative Abundance of *Veillonella* ~ response to FMT

Linear Hypotheses:

	Estimate	Std. Error	z value	Pr(> z)
Responder - Non-Responder == 0	-0.013494	0.007379	-1.829	0.0675 .

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

(Adjusted p values reported -- single-step method)

N) GLM Δ Relative Abundance of *Desulfovibrio* ~ prior antibiotic use

Linear Hypotheses:

	Estimate	Std. Error	z value	Pr(> z)
Yes - No == 0	-0.4849	0.2548	-1.903	0.057 .

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

(Adjusted p values reported -- single-step method)

O) GLM Δ Relative Abundance of *Escherichia* ~ prior antibiotic use

Linear Hypotheses:

	Estimate	Std. Error	z value	Pr(> z)
Yes - No == 0	-2.025	1.027	-1.972	0.0486 *

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

(Adjusted p values reported -- single-step method)