eTable 3: Association of Abundance of Taxa with Stool Short-Chain Fatty Acids

SCFA	Taxa	β Estimate[a]	P-Value[b]	Significant
Acetic acid	p__Bacteroidetes f__Rikenellaceae	-0.2623	4.719e-14	*
Acetic acid	p__Bacteroidetes g__Bacteroides	-0.2256	9.917e-08	*
Acetic acid	p__Bacteroidetes g__Parabacteroides	-0.1703	0.0004808	*
Acetic acid	p__Proteobacteria g__Bilophila	-0.1597	0.0004808	*
Acetic acid	p__Firmicutes g__Acidaminococcus	-0.1087	0.0005888	*
Acetic acid	p__Firmicutes f__Christensenellaceae	-0.1274	0.0007932	*
Acetic acid	p__Bacteroidetes g__Odoribacter	-0.1135	0.004818	*
Acetic acid	p__Bacteroidetes f__[Barnesiellaceae]	-0.07408	0.007729	*
Acetic acid	p__Fusobacteria g__Fusobacterium	-0.1076	0.01396	*
Acetic acid	p__Firmicutes g__Faecalibacterium	-0.09538	0.01396	*
Acetic acid	p__Proteobacteria g__Sutterella	-0.08545	0.02841	*
Acetic acid	p__Firmicutes g__[Eubacterium]	-0.07944	0.02841	*
Acetic acid	p__Firmicutes g__Blautia	-0.09495	0.03872	*
Acetic acid	p__Actinobacteria g__Corynebacterium	-0.08967	0.03872	*
Acetic acid	p__Firmicutes g__Oscillospira	-0.08509	0.03872	*
Acetic acid	p__Firmicutes g__Clostridium	-0.07806	0.04037	*
Acetic acid	p__Firmicutes g__[Ruminococcus]	-0.07937	0.0499	*
Acetic acid	p__Firmicutes g__Turicibacter	-0.06313	0.0499	*
Acetic acid	p__Firmicutes g__Ruminococcus	-0.07814	0.05393	
Acetic acid	p__Firmicutes g__Oribacterium	-0.05993	0.05393	
Acetic acid	p__Proteobacteria g__Pseudomonas	-0.06678	0.06143	
Acetic acid	p__Firmicutes g__Lactobacillus	-0.08139	0.06143	
Acetic acid	p__Firmicutes g__Holdemania	-0.06132	0.06143	
Acetic acid	p__Proteobacteria g__Pelomonas	-0.0591	0.06394	
Acetic acid	p__Firmicutes f__Ruminococcaceae	-0.07789	0.08195	
Acetic acid	p__Proteobacteria g__Ehrlichia	-0.02989	0.08388	
Acetic acid	p__Firmicutes f__Erysipelotrichaceae	-0.06727	0.08876	
Acetic acid	p__Firmicutes g__Enterococcus	-0.07469	0.08876	
Acetic acid	p__Proteobacteria g__Klebsiella	0.07416	0.08876	
Acetic acid	k__Bacteria	-0.07427	0.08876	
Butyric acid	p__Firmicutes f__Christensenellaceae	0.01039	1.684e-06	*
Butyric acid	p__Proteobacteria g__Bilophila	0.009597	0.001356	*
Butyric acid	p__Firmicutes g__Blautia	0.009176	0.001356	*
Butyric acid	p__Firmicutes g__Phascolarctobacterium	0.004353	0.002129	*
Butyric acid	p__Bacteroidetes g__Paraprevotella	0.003929	0.005345	*
Butyric acid	p__Firmicutes g__Dialister	0.006892	0.02499	*
Butyric acid	p__Firmicutes g__Catenibacterium	0.004093	0.02534	*

Butyric acid	p__Bacteroidetes g__Parabacteroides	0.008014	0.02536	*
Butyric acid	p__Bacteroidetes g__Butyricimonas	0.003893	0.02782	*
Butyric acid	p__Firmicutes f__Erysipelotrichaceae	0.00611	0.03948	*
Butyric acid	p__Bacteroidetes g__Odoribacter	0.004769	0.1175	
Butyric acid	p__Firmicutes g__Megasphaera	0.004279	0.1212	
Butyric acid	p__Firmicutes g__Turicibacter	0.003436	0.1348	
Isobutyric acid	p__Proteobacteria g__Ehrlichia	0.1492	9.405e-19	*
Isobutyric acid	p__Bacteroidetes f__Rikenellaceae	0.2253	9.405e-19	*
Isobutyric acid	p__Bacteroidetes f__[Barnesiellaceae]	0.1286	9.405e-19	*
Isobutyric acid	p__Proteobacteria g__Sutterella	0.1661	1.907e-15	*
Isobutyric acid	p__Bacteroidetes g__Bacteroides	0.2166	1.46e-11	*
Isobutyric acid	p__Firmicutes g__Faecalibacterium	0.1495	5.915e-10	*
Isobutyric acid	p__Firmicutes g__[Eubacterium]	0.1348	1.739e-09	*
Isobutyric acid	p__Bacteroidetes o__Bacteroidales	0.1415	2.385e-08	*
Isobutyric acid	p__Firmicutes g__Holdemania	0.1144	1.265e-07	*
Isobutyric acid	p__Firmicutes g__Clostridium	0.1332	5.836e-07	*
Isobutyric acid	p__Firmicutes f__Christensenellaceae	0.141	5.836e-07	*
Isobutyric acid	p__Firmicutes g__Ruminococcus	0.137	1.81e-06	*
Isobutyric acid	p__Bacteroidetes g__Odoribacter	0.1323	3.206e-06	*
Isobutyric acid	p__Firmicutes g__Oscillospira	0.1346	5.201e-06	*
Isobutyric acid	p__Firmicutes f__Ruminococcaceae	0.1438	6.805e-06	*
Isobutyric acid	p__Firmicutes g__Turicibacter	0.0945	1.874e-05	*
Isobutyric acid	p__Firmicutes g__Dialister	0.1346	2.853e-05	*
Isobutyric acid	p__Proteobacteria g__Bilophila	0.1419	3.957e-05	*
Isobutyric acid	p__Fusobacteria g__Fusobacterium	0.1229	4.79e-05	*
Isobutyric acid	p__Firmicutes g__[Ruminococcus]	0.1155	4.79e-05	*
Isobutyric acid	p__Actinobacteria g__Eggerthella	0.1154	5.755e-05	*
Isobutyric acid	p__Bacteroidetes g__Parabacteroides	0.1484	0.0001863	*
Isobutyric acid	p__Proteobacteria f__Enterobacteriaceae	0.1169	0.003508	*
Isobutyric acid	p__Verrucomicrobia g__Akkermansia	0.0936	0.004812	*
Isobutyric acid	p__Actinobacteria g__Atopobium	0.08822	0.004919	*
Isobutyric acid	p__Actinobacteria g__Corynebacterium	0.08423	0.005871	*
Isobutyric acid	p__Firmicutes g__Granulicatella	0.0936	0.006057	*
Isobutyric acid	p__Firmicutes g__Oribacterium	0.06412	0.006659	*
Isobutyric acid	p__Firmicutes o__Clostridiales	0.07501	0.006932	*
Isobutyric acid	p__Firmicutes g__Veillonella	0.09842	0.007904	*
Isobutyric acid	p__Firmicutes g__Parvimonas	0.07568	0.00865	*
Isobutyric acid	k__Bacteria	0.09393	0.009522	*
Isobutyric acid	p__Firmicutes g__Coprococcus	0.07214	0.02065	*

Isobutyric acid	p__Firmicutes g__Anaerococcus	0.0602	0.02473	*
Isobutyric acid	p__Firmicutes g__Enterococcus	0.07885	0.02513	*
Isobutyric acid	p__Firmicutes f__Streptococcaceae	0.06763	0.0252	*
Isobutyric acid	p__Bacteroidetes g__Prevotella	0.06607	0.04781	*
Caproic acid	p__Proteobacteria g__Ehrlichia	0.01825	4.707e-18	*
Caproic acid	p__Bacteroidetes f__[Barnesiellaceae]	0.0202	3.511e-15	*
Caproic acid	p__Proteobacteria g__Sutterella	0.02642	1.493e-13	*
Caproic acid	p__Bacteroidetes f__Rikenellaceae	0.03042	6.039e-09	*
Caproic acid	p__Firmicutes g__Faecalibacterium	0.02397	8.09e-09	*
Caproic acid	p__Firmicutes g__[Eubacterium]	0.02168	1.968e-08	*
Caproic acid	p__Bacteroidetes o__Bacteroidales	0.0246	3.924e-08	*
Caproic acid	p__Firmicutes g__Holdemania	0.01907	2.308e-07	*
Caproic acid	p__Firmicutes g__Clostridium	0.02276	7.361e-07	*
Caproic acid	p__Bacteroidetes g__Bacteroides	0.02887	1.266e-06	*
Caproic acid	p__Firmicutes g__Turicibacter	0.01774	1.641e-06	*
Caproic acid	p__Firmicutes g__Ruminococcus	0.0237	1.674e-06	*
Caproic acid	p__Firmicutes f__Christensenellaceae	0.02359	1.88e-06	*
Caproic acid	p__Firmicutes g__Oscillospira	0.02381	2.459e-06	*
Caproic acid	p__Firmicutes f__Ruminococcaceae	0.02537	3.95e-06	*
Caproic acid	p__Bacteroidetes g__Odoribacter	0.02241	4.29e-06	*
Caproic acid	p__Firmicutes g__[Ruminococcus]	0.0204	4.255e-05	*
Caproic acid	p__Actinobacteria g__Eggerthella	0.02074	4.812e-05	*
Caproic acid	p__Firmicutes g__Dialister	0.02242	0.0001464	*
Caproic acid	p__Verrucomicrobia g__Akkermansia	0.02146	0.0003701	*
Caproic acid	p__Proteobacteria g__Bilophila	0.02274	0.0003701	*
Caproic acid	p__Bacteroidetes g__Parabacteroides	0.025	0.0005357	*
Caproic acid	k__Bacteria	0.02107	0.001693	*
Caproic acid	p__Fusobacteria g__Fusobacterium	0.01879	0.003222	*
Caproic acid	p__Proteobacteria f__Enterobacteriaceae	0.022	0.003363	*
Caproic acid	p__Firmicutes g__Enterococcus	0.01452	0.04565	*
Caproic acid	p__Firmicutes g__Anaerococcus	0.0108	0.07957	
Caproic acid	p__Actinobacteria g__Corynebacterium	0.01214	0.1106	

SCFA, short-chain fatty acid

[a]A negative β estimate indicates that a lower taxa abundance is associated with a higher level of the short-chain fatty acid. A positive β estimate indicates that a lower taxa abundance is associated with a lower level of the short-chain fatty acid.

[b]P-values corrected for multiple comparisons with significance if corrected $p<0.05$.