Supplemental Materials

Effects of the Artificial Sweetener Neotame on the Gut Microbiome and Fecal Metabolites in Mice

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Table S1. Significantly different gut bacteria genera between the control and 4-week neotame consumed mice

Taxa	Control mice		Neotame-treated mice		Fold change	p- value
	Relative abundance	Variance	Relative abundance	Variance		
B1	0.0667	0.00130	0.1562	0.00196	2.343	0.0070
B2	0.1402	0.00590	0.3195	0.00419	2.280	0.0035
B3	0.0246	0.00048	0.0030	0.00000	-8.088	0.0480
B4	0.4130	0.01848	0.1988	0.00382	-2.078	0.0112
B5	0.0024	0.00001	0.0078	0.00001	3.180	0.0176
B6	0.0014	0.00000	0.0007	0.00000	-2.097	0.0307
B7	0.0009	0.00000	0.0004	0.00000	-2.214	0.0263
B8	0.1068	0.00071	0.0504	0.00084	-2.117	0.0115
B9	0.0001	0.00000	0.0000	0.00000	-	0.0196
B10	0.0011	0.00000	0.0003	0.00000	-3.390	0.0269
B11	0.0065	0.00000	0.0042	0.00000	-1.559	0.0474
B12	0.0368	0.00010	0.0173	0.00005	-2.128	0.0055
B13	0.0190	0.00005	0.0101	0.00001	-1.887	0.0276
B14	0.0126	0.00002	0.0071	0.00001	-1.759	0.0470
B15	0.0006	0.00000	0.0001	0.00000	-4.982	0.0027

*The abbreviations of bacteria genus are listed as below (k, bacteria; p, phylum; c, class; o, order; f, family; g, genus):

B1: k__Bacteria;p__Bacteroidetes;c__Bacteroidia;o__Bacteroidales;f__Bacteroidaceae;g__Bacteroides;
B2: k__Bacteria;p__Bacteroidetes;c__Bacteroidia;o__Bacteroidales;f__S24-7;g__Undefined;
B3: k__Bacteria;p__Deferribacteres;c__Deferribacteres;o__Deferribacterales;f__Deferribacteraceae; g__Mucispirillum;
B4: k__Bacteria;p__Firmicutes;c__Clostridia;o__Clostridiales;f__Undefined;g__Undefined;
B5: k__Bacteria;p__Firmicutes;c__Clostridia;o__Clostridiales;f__Clostridiaceae; g__CandidatusArthromitus;
B6: k__Bacteria;p__Firmicutes;c__Clostridia;o__Clostridiales;f__Dehalobacteriaceae; g__Dehalobacterium;
B7: k__Bacteria;p__Firmicutes;c__Clostridia;o__Clostridiales;f__Lachnospiraceae;g_undefined;
B8: k__Bacteria;p__Firmicutes;c__Clostridia;o__Clostridiales;f__Lachnospiraceae;g__Undefined;
B9: k__Bacteria;p__Firmicutes;c__Clostridia;o__Clostridiales;f__Lachnospiraceae;g__Blautia;

B10: k__Bacteria;p__Firmicutes;c__Clostridia;o__Clostridiales;f__Lachnospiraceae;g__Dorea;
B11: k__Bacteria;p__Firmicutes;c__Clostridia;o__Clostridiales;f__Lachnospiraceae;g__Ruminococcus;
B12: k__Bacteria;p__Firmicutes;c__Clostridia;o__Clostridiales;f__Ruminococcaceae;g__Undefined;
B13: k__Bacteria;p__Firmicutes;c__Clostridia;o__Clostridiales;f__Ruminococcaceae;g__Oscillospira;
B14: k__Bacteria;p__Firmicutes;c__Clostridia;o__Clostridiales;f__Ruminococcaceae;g__Ruminococcus;
B15: k__Bacteria;p__Firmicutes;c__Clostridia;o__Clostridiales;f__Mogibacteriaceae;g__Undefined.

Supplemental Material, Table S2. Identified significantly changed metabolites ($p < 0.05$, compared to controls) in fecal samples of neotame consumed mice.

Metabolites	Intensity (Control)	Intensity (Neotame)	Fold_change	p value
α-Tocopherol	17918.40	52139.20	2.91	0.0296
1,3-Dipalmitin	234277.16	470764.74	2.01	0.0001
7H-purine	128324.10	65536.59	-1.96	0.0290
Linoleic acid	659558.59	897080.28	1.36	0.0447
9H-Purine	291689.20	105043.81	-2.78	0.0331
Glycolic acid	321613.69	199950.60	-1.61	0.0263
Malic acid	291734.82	119909.72	-2.43	0.0114
Cholesterol	56759.19	102280.10	1.80	0.0267
Mannose-6-phosphate	519338.44	106003.63	-4.90	0.0434
Arachidic acid	260462.63	111128.03	-2.34	0.0173
L-Glutamic acid	478500.28	168870.35	-2.83	0.0142
1-Monopalmiti	11585.59	39277.09	3.39	0.0187
inosine	116336.70	23775.23	-4.89	0.0311
L-Lysine	2339317.60	1563038.96	-1.50	0.0419
Pyroglutamic acid	15110123.85	7976423.88	-1.89	0.0277
Stearic acid	363923.99	786258.86	2.16	0.0025
Valeric acid, 5-amino-	630675.10	306205.50	-2.06	0.0413
Phosphoric acid	19315799.99	15441629.09	-1.25	0.0031
α-Cortolone	490875.08	290194.65	-1.69	0.0245
Glyceric acid	65657.38	34671.71	-1.89	0.0021
Uracil	3646033.11	751739.04	-4.85	0.0427
Thymine	194232.78	137217.78	-1.42	0.0245
Serine	108239.27	78871.60	-1.37	0.0464
Carbodiimide	464003.29	591278.67	1.27	0.0454
Campesterol	20150.88	34516.50	1.71	0.0438
Stigmastanol	33034.50	64170.00	1.94	0.0249
Borane	718135.59	1016476.69	1.42	0.0280
beta-Sitosterol	45547.84	138507.52	3.04	0.0241