



Supplemental Figure 1. Changes in body weight of cats

Supplemental Table 1. The hematology values of cats

Parameter	Standard value	ID No.	0 weeks	4 weeks	8 weeks	10 weeks	Group
White blood cells ($10^2/\mu l$)	55-195	1	62	65	59	70	GA
		2	101	92	96	80	
		3	68	57	79	75	GB
		4	89	88	81	106	
		5	93	92	87	77	
		6	99	81	85	135	
Red blood cells ($\times 10^4/\mu l$)	500-1000	1	936	942	970	950	GA
		2	1038	1027	1124	1077	
		3	874	769	770	742	GB
		4	958	841	860	826	
		5	782	802	842	702	
		6	995	902	935	910	
Hemoglobin (g/dl)	8.0-15.0	1	12.1	12.0	12.4	11.6	GA
		2	14.0	13.4	14.4	13.6	
		3	12.6	11.2	10.7	9.6	GB
		4	12.5	10.9	11.4	10.7	
		5	11.3	11.9	12.1	9.8	
		6	14.1	13.5	14.1	13.2	
Hematocrit (%)	24.0-45.0	1	36.2	36.4	37.6	35.0	GA
		2	42.5	42.8	45.6	41.9	
		3	40.4	35.8	33.3	30.1	GB
		4	37.7	33.6	34.9	32.6	
		5	39.3	40.9	41.7	34.3	
		6	43.7	41.7	44.6	41.1	
Platelets ($\times 10^4/\mu l$)	30.0-80.0	1	24.8	19.1	19.2	18.7	GA
		2	36.0	23.3	17.2	18.1	
		3	16.0	ND	17.8	18.1	GB
		4	32.3	30.5	29.3	26.8	
		5	28.9	17.7	23.0	31.7	
		6	35.8	25.3	16.2	19.9	

ND, not detected

Supplemental table 2. The blood chemistry values of the cats

Parameter	Standard value	ID No.	0 weeks	4 weeks	8 weeks	10 weeks	Group
Triglyceride (mg/dl)	14-120	1	12	14	13	16	GA
		2	17	21	16	18	
		3	30	27	34	27	
		4	21	22	29	30	GB
		5	14	16	14	20	
		6	16	18	16	16	
Total cholesterol (mg/dl)	98-264	1	103	102	110	116	GA
		2	102	98	105	116	
		3	147	130	152	151	
		4	146	134	150	157	GB
		5	96	96	103	114	
		6	80	76	81	89	
Blood glucose (mg/dl)	58-132	1	86	83	95	85	GA
		2	89	125	116	134	
		3	161	119	82	263	
		4	86	98	94	130	GB
		5	92	98	81	198	
		6	71	95	88	83	
GOT (IU/l)	6-48	1	11	13	10	19	GA
		2	12	9	7	7	
		3	134	53	69	88	
		4	22	21	24	21	GB
		5	29	30	29	32	
		6	16	15	21	16	
GPT (IU/l)	20-122	1	40	54	49	57	GA
		2	46	44	37	38	
		3	240	178	227	187	
		4	44	45	54	43	GB
		5	88	81	90	84	
		6	58	75	84	69	
γ -GTP (IU/l)	0-2	1	1	1	1	1	GA
		2	1	1	1	1	
		3	1	1	1	1	
		4	1	1	1	1	GB
		5	1	1	1	1	
		6	1	1	1	1	
Bilirubin (mg/dl)	0.0-0.1	1	0.0	0.0	0.1	0.0	GA
		2	0.0	0.0	0.0	0.0	
		3	0.0	0.0	0.0	0.0	
		4	0.0	0.0	0.0	0.0	GB
		5	0.0	0.0	0.0	0.0	
		6	0.0	0.0	0.0	0.0	
Total protein (g/dl)	6.1-8.4	1	7.1	7.1	7.6	7.6	GA
		2	6.4	6.4	6.1	6.4	
		3	6.6	6.4	7.3	6.4	
		4	7.4	7.3	7.7	7.3	GB
		5	6.2	6.3	6.7	6.2	
		6	6.9	7.0	7.4	7.1	
Albumin (g/dl)	2.9-4.3	1	3.4	3.4	3.6	3.6	GA
		2	3.3	3.3	3.2	3.4	
		3	3.4	3.3	3.8	3.2	
		4	3.4	3.4	3.5	3.4	GB
		5	3.3	3.4	3.6	3.3	
		6	3.5	3.5	3.7	3.5	
ALP (IU/l)	30-228	1	61	75	92	90	GA
		2	85	142	123	133	
		3	81	75	82	92	
		4	71	61	67	71	GB
		5	66	71	72	79	
		6	36	50	42	39	
Urea nitrogen (mg/dl)	17-40	1	28	25	27	28	GA
		2	18	14	19	18	
		3	32	25	37	31	
		4	24	24	26	25	GB
		5	27	25	29	27	
		6	24	23	26	24	
Creatinine (mg/dl)	0.8-2.2	1	1.2	1.2	1.2	1.3	GA
		2	0.7	0.6	0.7	0.7	
		3	1.3	1.2	1.3	1.3	
		4	1.0	1.0	1.0	1.1	GB
		5	1.3	1.2	1.1	1.2	
		6	1.3	1.2	1.1	1.2	
Na (mmol/l)	148-155	1	154	153	153	156	GA
		2	153	154	154	159	
		3	155	156	157	152	
		4	153	153	153	151	GB
		5	156	154	158	154	
		6	156	156	159	156	
K (mmol/l)	3.5-5.2	1	4.4	4.3	3.9	4.6	GA
		2	4.6	4.2	4.1	4.2	
		3	4.2	3.7	4.5	4.5	
		4	4.6	4.5	4.4	4.7	GB
		5	4.8	4.4	4.8	4.1	
		6	4.2	3.8	4.5	3.8	
Cl (mmol/l)	115-124	1	122	120	121	124	GA
		2	122	120	121	125	
		3	123	119	123	122	
		4	123	120	122	123	GB
		5	123	123	126	124	
		6	124	123	125	125	
Mg (mg/dl)	2.2-2.9	1	2.2	2.2	2.3	2.2	GA
		2	2.3	2.4	2.3	2.4	
		3	1.9	1.9	2.0	2.0	
		4	2.3	2.3	2.4	2.3	GB
		5	2.2	2.2	2.3	2.2	
		6	2.4	2.3	2.5	2.3	
Ca (mg/dl)	9.0-11.2	1	9.1	8.8	9.0	8.9	GA
		2	8.9	8.8	8.9	9.0	
		3	9.3	9.5	10.4	8.7	
		4	9.2	9.2	9.2	9.0	GB
		5	9.4	10.3	10.0	9.0	
		6	10.0	9.9	10.7	9.8	
P (mg/dl)	2.6-6.2	1	4.7	4.6	4.9	4.9	GA
		2	4.3	3.7	4.4	4.6	
		3	5.4	4.4	5.9	4.4	
		4	4.1	4.3	4.2	4.6	GB
		5	4.0	5.7	5.3	3.9	
		6	5.1	4.7	4.9	4.9	

Supplemental table 3. Intestinal microbiota composition analysis at the phylum level in GA

Phylum	Average abundance (%) (Minimum% - Max%)			
	0 weeks	4 weeks	8 weeks	10 weeks
Firmicutes	62.43 (57.52 - 67.33)	63.41 (60.16 - 66.66)	58.50 (45.19 - 71.82)	62.19 (43.52 - 80.86)
Actinobacteria	8.13 (7.74 - 8.52)	10.53 (8.73 - 12.32)	16.62 (11.13 - 22.12)	8.12 (6.99 - 9.26)
Bacteroidetes	9.08 (4.97 - 13.19)	5.32 (5.09 - 5.55)	3.02 (2.70 - 3.33)	9.02 (1.55 - 16.49)
Proteobacteria	0.56 (0.36 - 0.77)	0.43 (0.32 - 0.54)	0.22 (0.21 - 0.22)	1.01 (0.08 - 1.95)
Fusobacteria	0.18 (0.04 - 0.31)	0.01 (0.01 - 0.02)	0.02 (0.01 - 0.02)	0.17 (0.03 - 0.31)
Verrucomicrobia	0.02 (0.02 - 0.02)	0.01 (0.01 - 0.01)	0.02 (0.01 - 0.03)	0.03 (0.02 - 0.04)

Supplemental table 4. Intestinal microbiota composition analysis at the phylum level in GB

Phylum	Average abundance (%) (Minimum% - Max%)			
	0 weeks	4 weeks	8 weeks	10 weeks
Firmicutes	45.32 (43.33 - 47.57)	37.99 (32.20 - 47.30)	39.68 (34.04 - 45.65)	42.42 (35.26 - 48.40)
Actinobacteria	14.80 (9.61 - 21.46)	21.17 (9.16 - 46.00)	22.58 (11.77 - 34.72)	9.57 (4.50 - 19.36)
Bacteroidetes	9.19 (6.26 - 14.68)	12.29 (3.94 - 17.27)	9.65 (5.95 - 12.48)	14.98 (6.72 - 20.21)
Proteobacteria	0.47 (0.25 - 0.72)	0.92 (0.24 - 1.28)	0.70 (0.22 - 1.12)	1.08 (0.38 - 1.48)
Fusobacteria	0.13 (0.03 - 0.31)	0.30 (0.04 - 0.47)	0.17 (0.04 - 0.31)	0.48 (0.06 - 0.64)
Verrucomicrobia	0.07 (0.03 - 0.16)	0.04 (0.02 - 0.06)	0.04 (0.02 - 0.04)	0.06 (0.03 - 0.12)

Supplemental table 5. Intestinal microbiota composition analysis at the genus level in GA

Genus	Average abundance (%) (Minimum% - Max%)			
	0 weeks	4 weeks	8 weeks	10 weeks
<i>Lactobacillus</i>	35.44 (27.67 - 43.21)	38.37 (28.48 - 48.25)	28.59 (17.67 - 39.51)	31.69 (10.67 - 52.72)
<i>Blautia</i>	11.82 (11.60 - 12.05)	8.84 (6.86 - 10.81)	8.74 (7.14 - 10.35)	14.26 (11.77 - 16.76)
<i>Collinsella</i>	7.54 (7.08 - 8.00)	7.87 (6.83 - 8.91)	9.49 (7.68 - 11.29)	7.36 (6.46 - 8.26)
<i>Prevotella</i>	8.57 (4.11 - 13.03)	5.06 (4.80 - 5.31)	2.77 (2.51 - 3.04)	8.18 (1.49 - 14.88)
<i>Clostridium hiranonis</i>	5.98 (5.81 - 6.16)	5.00 (4.80 - 5.20)	4.45 (3.96 - 4.95)	8.08 (7.15 - 9.02)
<i>Megasphaera</i>	5.21 (1.01 - 9.40)	7.12 (2.98 - 11.27)	5.50 (2.27 - 8.74)	3.00 (0.63 - 5.36)
<i>Bifidobacterium</i>	0.34 (0.31 - 0.38)	2.4 (1.59 - 3.12)	6.8 (3.05 - 10.55)	0.4 (0.27 - 0.51)
<i>Streptococcus</i>	0.05 (0.05 - 0.06)	0.07 (0.04 - 0.10)	7.35 (0.27 - 14.43)	0.07 (0.06 - 0.08)
<i>Turicibacter</i>	0.00 (0.00 - 0.00)	0.00 (0.00 - 0.00)	0.00 (0.00 - 0.00)	0.06 (0.00 - 0.11)
<i>Lachnoclostridium</i>	0.53 (0.27 - 0.79)	0.55 (0.48 - 0.63)	0.50 (0.36 - 0.63)	0.56 (0.26 - 0.87)
<i>Faecalibacterium</i>	0.93 (0.91 - 0.96)	0.46 (0.44 - 0.49)	0.32 (0.17 - 0.47)	1.08 (0.40 - 1.75)
<i>Ruminococcus</i>	0.51 (0.32 - 0.71)	0.34 (0.26 - 0.41)	0.45 (0.24 - 0.66)	1.17 (0.59 - 1.74)
<i>Subdoligranulum</i>	0.51 (0.23 - 0.78)	0.31 (0.18 - 0.43)	0.57 (0.40 - 0.74)	0.20 (0.12 - 0.27)
<i>Megamonas</i>	0.25 (0.12 - 0.37)	0.30 (0.26 - 0.35)	0.11 (0.03 - 0.19)	0.10 (0.02 - 0.18)
<i>Paeniclostridium</i>	0.01 (0.00 - 0.02)	0.15 (0.13 - 0.16)	0.07 (0.03 - 0.11)	0.01 (0.00 - 0.02)
<i>Slackia</i>	0.17 (0.14 - 0.19)	0.17 (0.16 - 0.19)	0.24 (0.19 - 0.28)	0.24 (0.18 - 0.30)
<i>Tyzzera</i>	0.18 (0.03 - 0.33)	0.10 (0.04 - 0.15)	0.12 (0.00 - 0.24)	0.36 (0.03 - 0.69)
<i>Bacteroides</i>	0.33 (0.05 - 0.60)	0.13 (0.12 - 0.14)	0.06 (0.06 - 0.07)	0.56 (0.01 - 1.11)
<i>Desulfovibrio</i>	0.22 (0.09 - 0.35)	0.15 (0.15 - 0.15)	0.08 (0.07 - 0.10)	0.42 (0.04 - 0.80)
<i>Enterococcus</i>	0.14 (0.09 - 0.18)	0.10 (0.03 - 0.18)	0.02 (0.02 - 0.03)	0.46 (0.07 - 0.86)
<i>Clostridium</i>	0.03 (0.02 - 0.04)	0.48 (0.06 - 0.91)	0.21 (0.15 - 0.27)	0.36 (0.02 - 0.69)
<i>Parabacteroides</i>	0.12 (0.07 - 0.16)	0.09 (0.03 - 0.16)	0.08 (0.03 - 0.13)	0.09 (0.04 - 0.13)
<i>Fusobacterium</i>	0.18 (0.04 - 0.31)	0.01 (0.01 - 0.01)	0.01 (0.01 - 0.02)	0.16 (0.03 - 0.29)
<i>Lactonifactor</i>	0.11 (0.03 - 0.19)	0.17 (0.09 - 0.26)	0.35 (0.21 - 0.48)	0.05 (0.03 - 0.06)
<i>Paraprevotella</i>	0.02 (0.01 - 0.03)	0.02 (0.00 - 0.05)	0.03 (0.01 - 0.06)	0.15 (0.00 - 0.29)
<i>Anaerobiospirillum</i>	0.07 (0.00 - 0.14)	0.08 (0.00 - 0.15)	0.05 (0.00 - 0.09)	0.35 (0.00 - 0.70)
<i>Butyricoccus</i>	0.18 (0.13 - 0.23)	0.15 (0.12 - 0.18)	0.11 (0.09 - 0.13)	0.11 (0.04 - 0.18)
<i>Catenibacterium</i>	0.16 (0.07 - 0.25)	0.15 (0.08 - 0.21)	0.09 (0.03 - 0.15)	0.13 (0.08 - 0.19)
<i>Sutterella</i>	0.23 (0.22 - 0.24)	0.12 (0.09 - 0.15)	0.05 (0.03 - 0.08)	0.18 (0.01 - 0.35)
<i>Alistipes</i>	0.03 (0.01 - 0.06)	0.02 (0.02 - 0.02)	0.05 (0.03 - 0.07)	0.04 (0.00 - 0.07)
<i>Adlercreutzia</i>	0.03 (0.03 - 0.04)	0.05 (0.04 - 0.07)	0.05 (0.02 - 0.07)	0.06 (0.03 - 0.08)
<i>Allisonella</i>	0.10 (0.02 - 0.19)	0.18 (0.15 - 0.21)	0.18 (0.02 - 0.35)	0.12 (0.06 - 0.18)
<i>Actinomyces</i>	0.02 (0.02 - 0.02)	0.03 (0.02 - 0.04)	0.02 (0.02 - 0.03)	0.03 (0.02 - 0.04)
<i>Acidaminococcus</i>	0.01 (0.00 - 0.02)	0.23 (0.00 - 0.46)	0.51 (0.00 - 1.03)	0.00 (0.00 - 0.00)

Supplemental table 6. Intestinal microbiota composition analysis at the genus level in GB

Genus	Average abundance (%) (Minimum% - Max%)			
	0 weeks	4 weeks	8 weeks	10 weeks
<i>Lactobacillus</i>	0.09 (0.04 - 0.20)	2.44 (0.09 - 8.58)	0.43 (0.10 - 0.89)	0.06 (0.04 - 0.07)
<i>Blautia</i>	18.08 (14.06 - 22.05)	13.95 (9.95 - 19.02)	16.49 (10.73 - 19.3)	18.36 (16.01 - 22.62)
<i>Collinsella</i>	10.39 (8.66 - 12.58)	12.96 (7.78 - 18.44)	15.55 (9.60 - 21.90)	7.67 (3.97 - 13.72)
<i>Prevotella</i>	8.04 (4.981 - 13.55)	11.24 (3.811 - 15.52)	8.68 (5.605 - 11.01)	13.67 (4.869 - 19.29)
<i>Clostridium hiranonis</i>	11.19 (4.27 - 17.82)	6.57 (3.03 - 8.87)	8.42 (3.73 - 13.35)	10.77 (8.94 - 11.99)
<i>Megasphaera</i>	1.69 (0.11 - 5.03)	2.96 (0.631 - 5.642)	6.13 (3.207 - 12.02)	0.21 (0.014 - 0.569)
<i>Bifidobacterium</i>	3.38 (0.17 - 8.06)	7.60 (0.16 - 26.85)	6.38 (1.33 - 20.60)	1.00 (0.07 - 3.54)
<i>Streptococcus</i>	0.24 (0.08 - 0.49)	3.93 (0.07 - 15.35)	1.65 (0.05 - 6.34)	4.12 (0.11 - 15.94)
<i>Turicibacter</i>	7.30 (0.00 - 17.27)	2.08 (0.00 - 8.18)	0.57 (0.00 - 2.26)	2.63 (0.00 - 10.51)
<i>Lachnoclostridium</i>	1.42 (1.20 - 1.68)	0.93 (0.45 - 1.22)	0.82 (0.38 - 1.03)	1.05 (0.76 - 1.34)
<i>Faecalibacterium</i>	0.56 (0.16 - 1.17)	0.73 (0.18 - 1.38)	0.56 (0.08 - 1.15)	0.83 (0.09 - 1.33)
<i>Ruminococcus</i>	0.85 (0.61 - 1.34)	0.44 (0.34 - 0.60)	0.42 (0.21 - 0.62)	0.85 (0.58 - 1.05)
<i>Subdoligranulum</i>	1.11 (0.12 - 2.49)	0.38 (0.10 - 0.89)	0.53 (0.17 - 0.91)	0.26 (0.07 - 0.71)
<i>Megamonas</i>	0.04 (0.01 - 0.07)	1.66 (0.01 - 4.64)	1.40 (0.19 - 3.66)	0.06 (0.00 - 0.21)
<i>Paeniclostridium</i>	1.07 (0.36 - 1.85)	0.20 (0.00 - 0.65)	0.69 (0.25 - 1.30)	0.87 (0.00 - 2.43)
<i>Slackia</i>	0.68 (0.48 - 0.85)	0.40 (0.27 - 0.54)	0.38 (0.24 - 0.47)	0.67 (0.28 - 1.79)
<i>Tyzzerella</i>	0.23 (0.14 - 0.40)	0.37 (0.01 - 0.77)	0.42 (0.01 - 1.04)	0.83 (0.73 - 0.99)
<i>Bacteroides</i>	0.29 (0.23 - 0.39)	0.32 (0.06 - 0.63)	0.29 (0.07 - 0.51)	0.56 (0.17 - 1.33)
<i>Desulfovibrio</i>	0.20 (0.11 - 0.43)	0.39 (0.02 - 0.64)	0.32 (0.08 - 0.61)	0.73 (0.15 - 0.95)
<i>Enterococcus</i>	0.34 (0.03 - 1.02)	0.00 (0.00 - 0.01)	0.06 (0.01 - 0.17)	0.33 (0.03 - 0.57)
<i>Clostridium</i>	0.31 (0.01 - 0.67)	0.15 (0.00 - 0.27)	0.20 (0.02 - 0.40)	0.20 (0.01 - 0.67)
<i>Parabacteroides</i>	0.27 (0.15 - 0.45)	0.29 (0.02 - 0.52)	0.24 (0.07 - 0.38)	0.25 (0.16 - 0.36)
<i>Fusobacterium</i>	0.12 (0.03 - 0.30)	0.29 (0.03 - 0.46)	0.16 (0.04 - 0.31)	0.48 (0.04 - 0.64)
<i>Lactonifactor</i>	0.12 (0.02 - 0.28)	0.23 (0.02 - 0.71)	0.22 (0.02 - 0.75)	0.25 (0.02 - 0.89)
<i>Paraprevotella</i>	0.23 (0.09 - 0.54)	0.24 (0.02 - 0.51)	0.27 (0.12 - 0.64)	0.34 (0.06 - 0.68)
<i>Anaerobiospirillum</i>	0.06 (0.01 - 0.13)	0.32 (0.00 - 0.55)	0.22 (0.00 - 0.46)	0.22 (0.06 - 0.44)
<i>Butyricoccus</i>	0.12 (0.03 - 0.26)	0.18 (0.03 - 0.27)	0.10 (0.07 - 0.12)	0.17 (0.05 - 0.27)
<i>Catenibacterium</i>	0.06 (0.01 - 0.08)	0.25 (0.08 - 0.47)	0.06 (0.02 - 0.12)	0.09 (0.01 - 0.12)
<i>Sutterella</i>	0.05 (0.02 - 0.07)	0.12 (0.00 - 0.30)	0.08 (0.00 - 0.20)	0.03 (0.02 - 0.04)
<i>Alistipes</i>	0.25 (0.09 - 0.36)	0.08 (0.01 - 0.16)	0.08 (0.04 - 0.13)	0.09 (0.03 - 0.19)
<i>Adlercreutzia</i>	0.13 (0.09 - 0.16)	0.11 (0.05 - 0.18)	0.11 (0.06 - 0.19)	0.13 (0.11 - 0.15)
<i>Allisonella</i>	0.02 (0.00 - 0.03)	0.09 (0.07 - 0.11)	0.12 (0.01 - 0.21)	0.04 (0.00 - 0.10)
<i>Actinomyces</i>	0.14 (0.09 - 0.23)	0.05 (0.02 - 0.09)	0.09 (0.05 - 0.15)	0.05 (0.02 - 0.09)
<i>Acidaminococcus</i>	0.00 (0.00 - 0.01)	0.06 (0.00 - 0.23)	0.11 (0.00 - 0.42)	0.00 (0.00 - 0.00)