Effects of konjac glucomannan intake patterns on glucose and lipid metabolism of obese mice induced by high fat diet

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Table S1 Diet formula and energy

Material	D12450J (10 kcal% Fat)		D12492 (60 kcal% Fat)	
	gm	kcal	gm	kcal
Casein	200	800	200	800
L-Cystine	3	12	3	12
Corn Starch	506.2	2024.8	0	0
Maltodextrin 10	125	500	125	500
Sucrose	68.8	275.2	68.8	275.2
Cellulose,BW200	50	0	50	0
Soybean Oil	25	225	25	225
Lard	20	180	245	2205
Mneral Mx S10026	10	0	10	0
DiCalcium Phosphate	13	0	13	0
Calcium Carbonate	5.5	0	5.5	0
Potassium Citrate,1 H2O	16.5	0	16.5	0
Vitamin Mx V10001	10	40	10	40
Choline Bitartrate	2	0	2	0
FD&C Yellow Dye#5	0.04	0	0	0
FD&C Blue Dye#1	0.01	0	0.05	0
	gm %	kcal%	gm%	kcal%
Protein	19.2	20	26.2	20
Carbohydrate	67.3	70.0	26.3	20.1
Fat	4.3	10	34.9	59.9
Total		100		100
Total	1055.05	4057	773.85	4057

Table S2 Primer information of genes to be tested

Item		Base sequence (5`-3`)
GCK	sense	CCCAGTCGTTGACTCTGGTAG
	antisense	CCACGGTCCATCTCCTTCTG
GSK-3β	sense	GCTGTGTGTTGGCTGAATTGT
	antisense	TGCTCCTGGTGAGTCCTTTGT
Glut4	sense	GGCTCTGACGTAAGGATGGG
	antisense	GCCACGTTGCATTGTAGCTC
G-6-pase	sense	TGAGACCGGACCAGGAAGTC
	antisense	GCAAGGTAGATCCGGGACAG
PEPCK	sense	GGGTGGAAGGTCGAATGTGT
	antisense	AGCCCTTAAGTTGCCTTGGG
LDLR	sense	ACAGGTGTGAAGATATTGACGAGTG
	antisense	CGGTTGGTGAAGAGCAGATAGC
SR-B1	sense	CCTCTGTCTCCGTCTCCTTC
	antisense	TCTATGCGGACATTCTTGAGCA
CYP7A1	sense	ACACTACTTCTGCGAAGGCAT
	antisense	CCCGGAGGTCTCATGACAGA
FXR	sense	TGAGGGCTGCAAAGGTTTCT
	antisense	ACCTGTATACATACATTCAGCCAAC
PPARα	sense	TGCCTTCCCTGTGAACTGAC
	antisense	CACAGAGCGCTAAGCTGTGA
β-actin	sense	CACTGTCGAGTCGCGTCC
	antisense	TCATCCATGGCGAACTGGTG

Table S3 Linear regression equation and precision of SCFA standards

SCFA	Retention Time (min)	Regression equation	Linear range (μmoL/mL)	R	Repeatability RSD (%)
Acetic	5.45	y=9.8424x-520.62	78.125~5000	0.9975	5.44
Propionic	6.55	y=21.808x-1072	78.125~5000	0.9992	4.72
Isobutyric	6.91	y=29.927x-1217	78.125~5000	0.9975	5.65
Butyric	7.73	y=33.669x-1534.5	78.125~5000	0.9975	5.51
Isovaleric	8.23	y=46.841x-1962.9	78.125~5000	0.9980	7.59
Valeric	9.13	y=47.235x-2236.8	78.125~5000	0.9980	7.62

Table S4 Effects of different treatments on body weight of mice.

Week	C	HF	KS	DK	KG	FKG
0	19.67±1.07^{a}	19.63±0.99^{a}	19.63±0.90^{a}	19.63±0.78^{a}	19.64±0.72^{a}	19.63±0.64^{a}
1	20.88±0.77^{a}	21.81±1.13^{a}	21.13±0.63^{a}	21.25±1.26^{a}	20.68±0.48^{a}	21.35±0.98^{a}
2	22.02±0.83^{a}	22.89±1.39^{a}	21.76±0.70^{a}	22.17±1.26^{a}	21.78±0.40^{a}	22.16±1.45^{a}
3	22.66±1.04^{a}	23.91±1.53^{a}	22.69±0.93^{a}	23.22±1.27^{a}	23.19±0.79^{a}	23.11±1.49^{a}
4	23.69±1.17^{a}	25.06±1.63^{a}	23.68±0.98^{a}	23.95±1.18^{a}	24.22±0.87^{a}	24.12±1.69^{a}
5	25.12±1.40^{a}	26.46±1.81^{b}	24.80±1.11^{a}	25.27±1.42^{ab}	25.30±1.11^{ab}	25.05±1.69^{ab}
6	25.53±1.45^{a}	27.68±1.80^{b}	25.70±1.12^{a}	25.82±1.23^{ab}	25.85±1.15^{ab}	25.54±1.90^{ab}
7	25.44±1.30^{a}	28.75±2.08^{b}	26.43±1.33^{ab}	26.97±1.34^{ab}	26.8±1.45^{ab}	26.22±2.06^{ab}
8	25.77±1.30^{a}	29.68±2.10^{b}	26.78±1.40^{a}	27.53±1.12^{ab}	27.22±1.82^{ab}	26.63±2.40^{ab}
9	26.17±1.32^{a}	30.66±1.87^{b}	27.23±1.40^{a}	28.26±1.24^{a}	28.16±1.85^{a}	27.25±2.36^{a}
10	26.26±1.36^{a}	31.53±2.24^{b}	27.72±1.36^{a}	28.79±1.36^{a}	28.84±1.81^{a}	27.66±2.29^{a}
11	26.00±1.21^{a}	32.00±2.31^{c}	28.29±1.36^{ab}	29.64±1.44^{ab}	29.50±2.11^{ab}	28.08±2.79^{ab}
12	26.25±1.15^{a}	32.84±1.63^{c}	28.96±1.00^{b}	29.86±1.89^{b}	29.86±1.39^{b}	28.30±1.73^{ab}

Note: Different lowercase letters in the same line indicated a statistically significant difference between groups (P< 0.05).

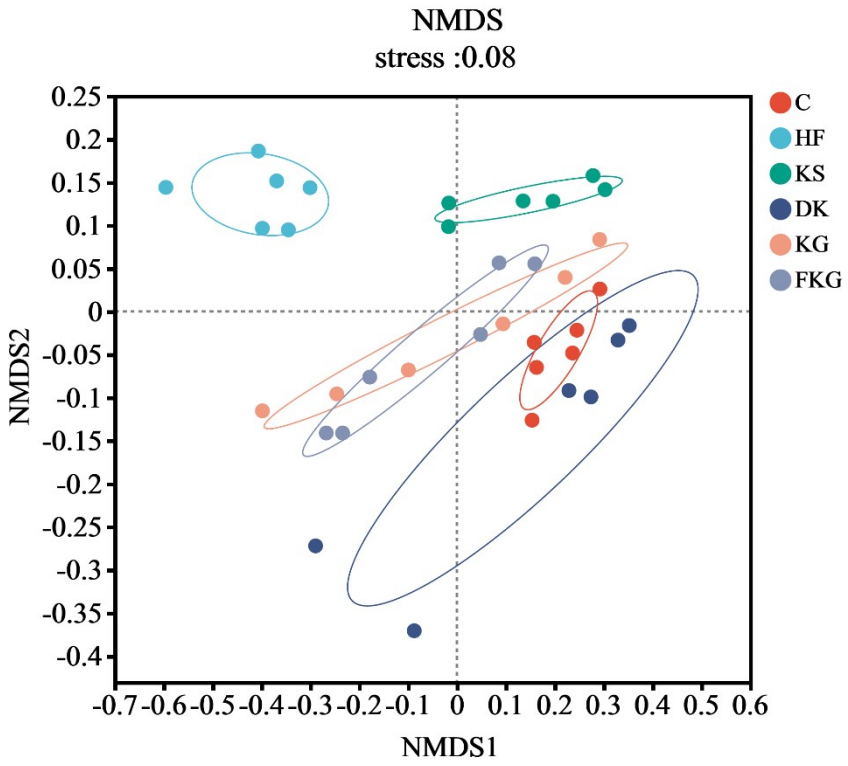

Fig.S1 NMDS analysis of β diversity index of mouse intestinal flora