A unique profile of gut microbiota associated with metabolic syndrome: a remote island most afflicted by obesity in Japan

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Supplementary figure legends

Figure S1 Composition of gut microbiota in NO and OB subjects showing relative abundance at the phylum level.
NO; non-obese (blue) (n = 81), OB; obese (red) (n = 59).

Figure S2 Composition of gut microbiota in MHO and MUO subjects showing relative abundance at the phylum level.
MHO; metabolically healthy obese (light blue) (n = 54) and MUO; metabolically unhealthy obese (orange) (n = 21).

Figure S3 Concentration of plasma short chain fatty acids (SCFAs) in NO and OB subjects. **a-d.** SCFA concentrations of acetate, propionate, butyrate, and valerate. **e.** Total concentration of plasma SCFAs. NO; non-obese (blue) (n = 81) and OB; obese (red) (n = 59). Data are shown as median and 25th – 75th percentiles. Data were analyzed using Mann-Whitney U test to compare groups.

Figure S4 Concentration of plasma SCFAs in MHO and MUO subjects. **a-d.** SCFA concentrations of acetate, propionate, butyrate, and valerate. **e.** Total concentration of plasma SCFAs. MHO; metabolically healthy obese (light blue) (n = 54) and MUO; metabolically unhealthy obese (orange) (n = 21). Data are shown as median and 25th – 75th percentiles. Data were analyzed using Mann-Whitney U test to compare groups.

Table S1 Measurement conditions of CE-TOFMS

Figure S1

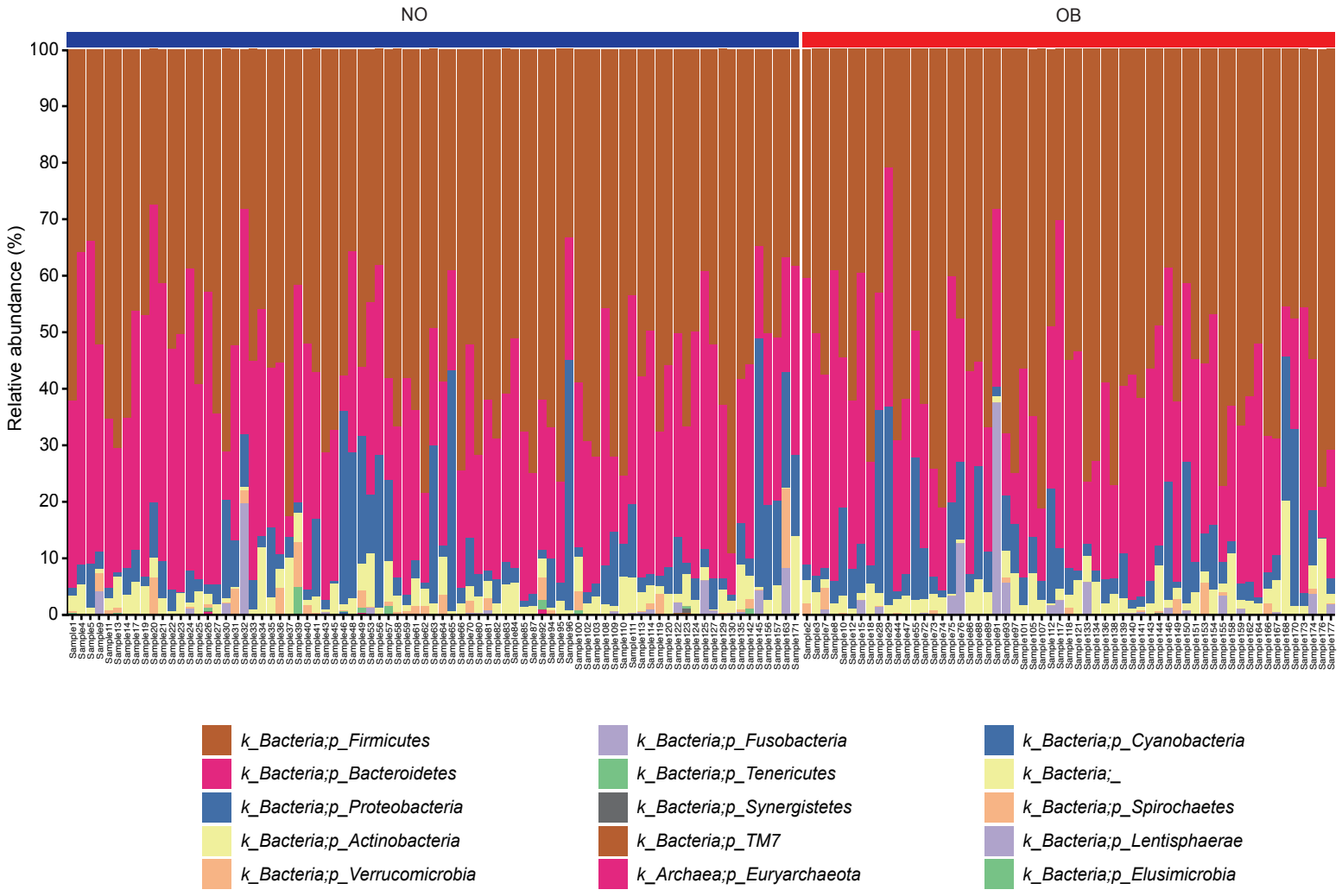
NO
OB
Relative abundance (%)
100
90
80
70
60
50
40
30
20
10
0
k_Bacteria;p_Firmicutes
k_Bacteria;p_Bacteroidetes
k_Bacteria;p_Proteobacteria
k_Bacteria;p_Actinobacteria
k_Bacteria;p_Verrucomicrobia
k_Bacteria;p_Fusobacteria
k_Bacteria;p_Tenericutes
k_Bacteria;p_Synergistetes
k_Bacteria;p_TM7
k_Archaea;p_Euryarchaeota
k_Bacteria;p_Cyanobacteria
k_Bacteria;_
k_Bacteria;p_Spirochaetes
k_Bacteria;p_Lentisphaerae
k_Bacteria;p_Elusimicrobia

Figure S2

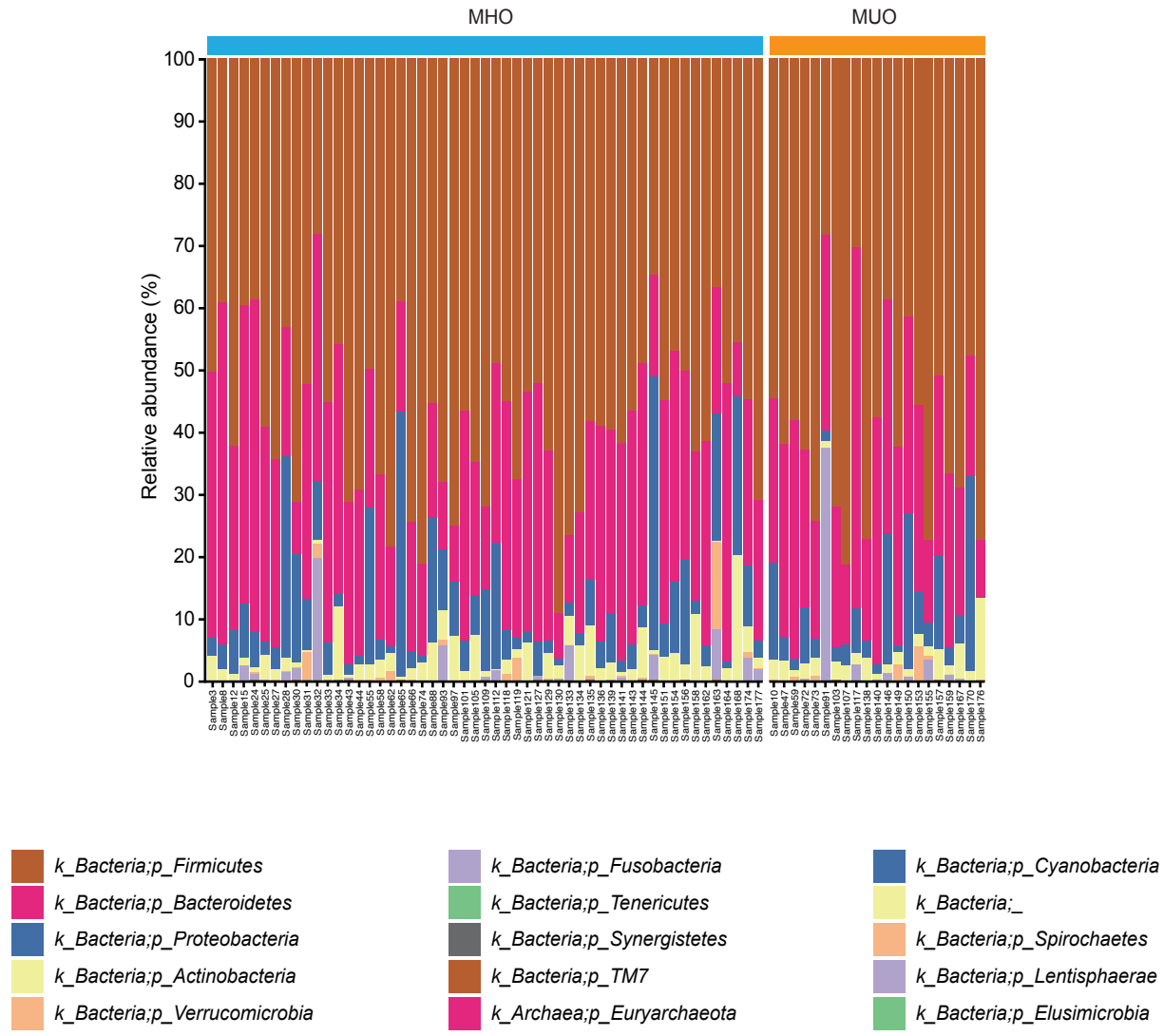
MHO
MUO
Relative abundance (%)
100
90
80
70
60
50
40
30
20
10
0
k_Bacteria;p_Firmicutes
k_Bacteria;p_Bacteroidetes
k_Bacteria;p_Proteobacteria
k_Bacteria;p_Actinobacteria
k_Bacteria;p_Verrucomicrobia
k_Bacteria;p_Fusobacteria
k_Bacteria;p_Tenericutes
k_Bacteria;p_Synergistetes
k_Bacteria;p_TM7
k_Archaea;p_Euryarchaeota
k_Bacteria;p_Cyanobacteria
k_Bacteria;_
k_Bacteria;p_Spirochaetes
k_Bacteria;p_Lentisphaerae
k_Bacteria;p_Elusimicrobia

Figure S3

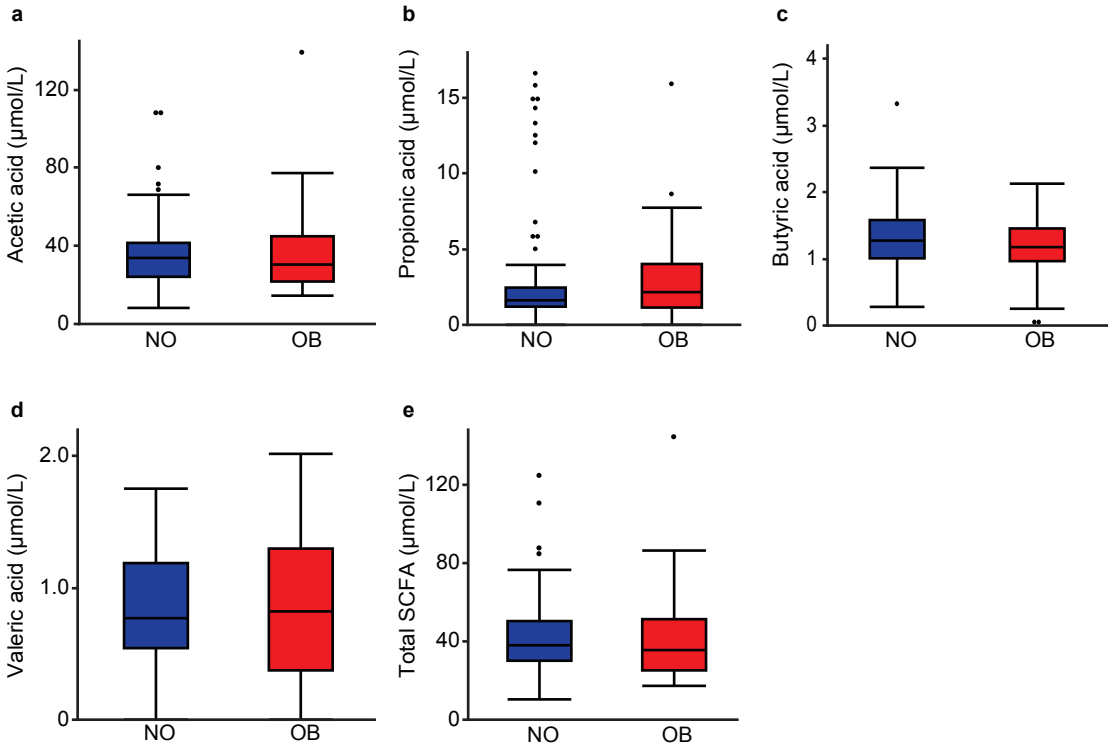
a
Acetic acid (µmol/L)
120
80
40
0
NO
OB
b
Propionic acid (µmol/L)
15
10
5
0
NO
OB
c
Butyric acid (µmol/L)
4
3
2
1
0
NO
OB
d
Valeric acid (µmol/L)
2.0
1.0
0
NO
OB
e
Total SCFA (µmol/L)
120
80
40
0
NO
OB

Figure S4

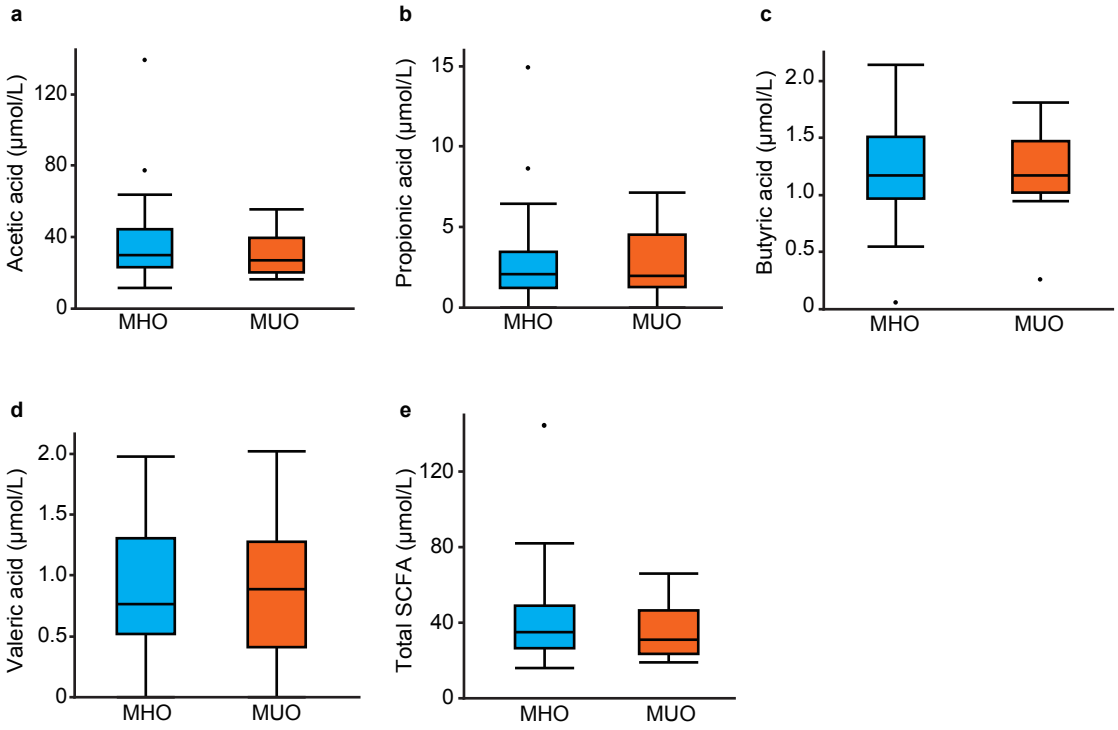
a
Acetic acid (μmol/L)
120
80
40
0
MHO
MUO
b
Propionic acid (μmol/L)
15
10
5
0
MHO
MUO
c
Butyric acid (μmol/L)
2.0
1.5
1.0
0.5
0
MHO
MUO
d
Valeric acid (μmol/L)
2.0
1.5
1.0
0.5
0
MHO
MUO
e
Total SCFA (μmol/L)
120
80
40
0
MHO
MUO

Table S1; Mesuring conditions of CE-TOFMS

	cation	anion
Run buffer	Cation Buffer Solution (p/n :H3301-1001)	Ation Buffer Solution (p/n :I3302-1023)
Rinse buffer	Cation Buffer Solution (p/n :H3301-1001)	Ation Buffer Solution (p/n :I3302-1023)
Sample injection	Pressure injection 50 mbar, 5 sec	Pressure injection 50 mbar, 10 sec
CE voltage	Positive, 30kV	Positive, 30kV
MS ionization	ESI Positive	ESI Negative
MS capillary voltage	4,000V	3,500V
MS scan range	m/z 50-1,000	m/z 50-1,000
Sheath liquid	HMT Sheath Liquid (p/n :H3301-1020)	HMT Sheath Liquid (p/n :H3301-1020)