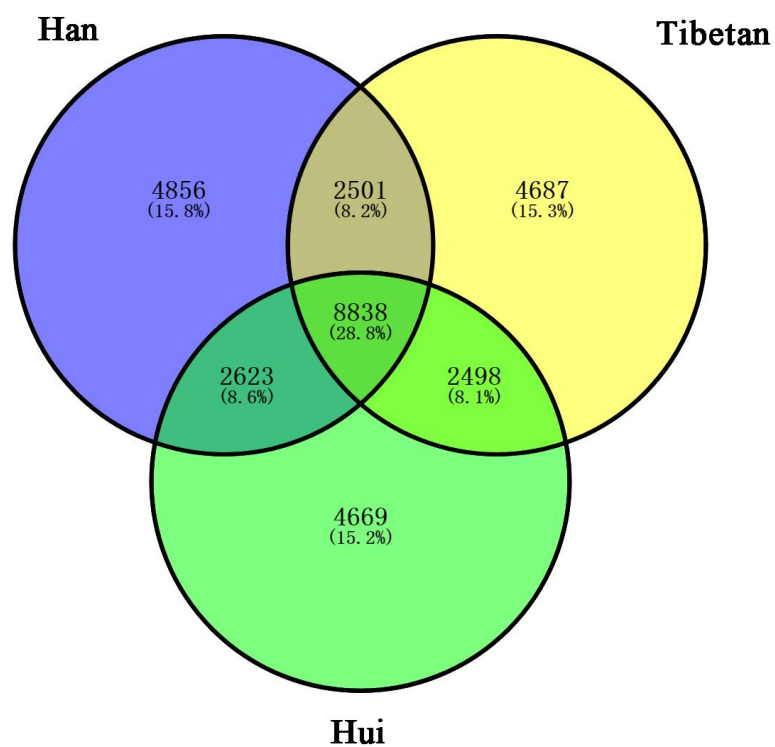
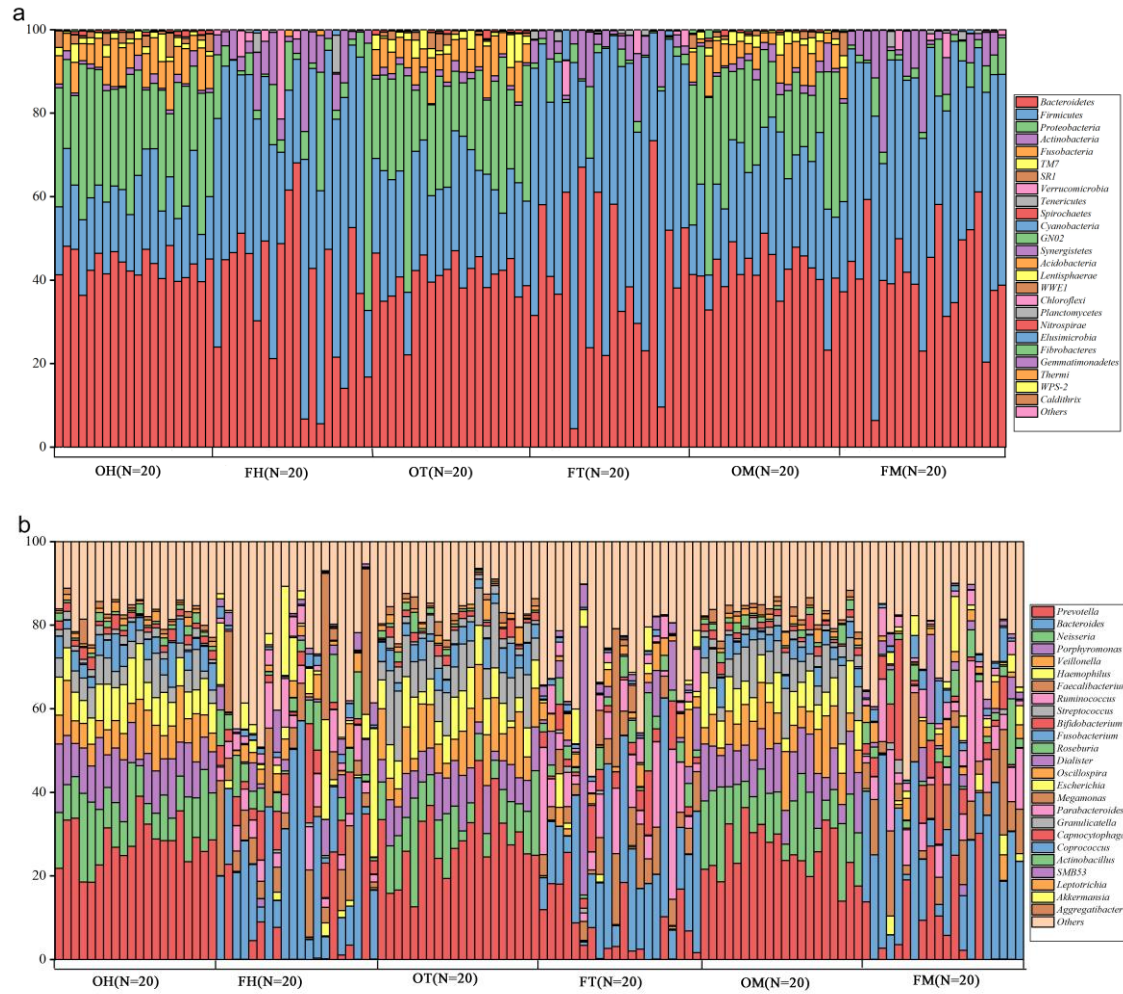


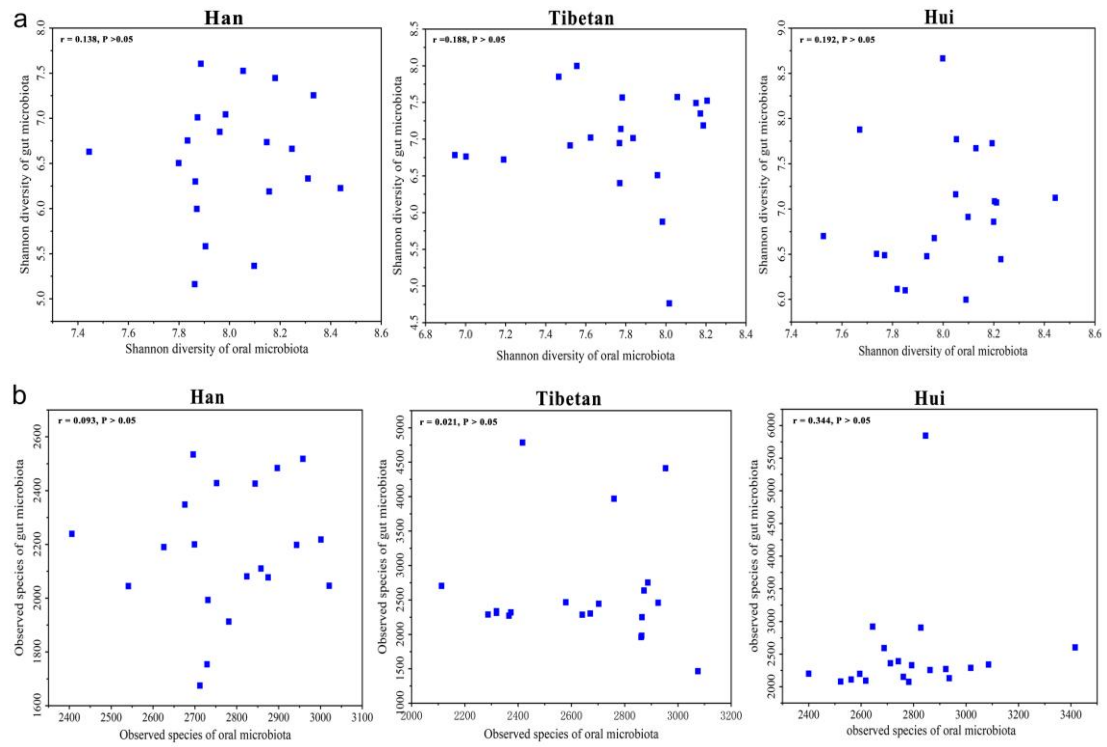
**Supplementary Figure 1.** Sample rarefaction curves.



**Supplementary Figure 2.** Venn diagram at the OTU level. The overlaps represent the common taxa among different groups, and the non-overlapping portions represent unique taxa in each group.



**Supplementary Figure 3.** Composition of oral and gut microbiota. (a) Results at the phylum level. (b) Results at the genus level.



**Supplementary Figure 4.** Correlation between alpha diversity of oral and gut microbiota. (a) Shannon diversity. (b) Observed species.

**Supplementary Table 1.** Average daily food intake in the three ethnic groups.

Food species	Han (n = 20)	Tibetan (n = 20)	Hui (n = 20)
	Intake (g)	Intake (g)	Intake (g)
Grains	120.63(79.94 – 239.25)	137.75(70.00 – 320.25)	133.50(71.38 – 328.25)
Vegetables	114.14(40.06 – 262.38)	73.87(44.62 – 258.32)	93.45(28.78 – 223.45)
Fruits	157.71(58.09 – 269.64)	77.00(32.80 – 266.55)	92.33(36.46 – 246.41)
Poultry meat	6.61(2.41 – 12.30) *	0.22(0.00 – 6.00)	6.43(1.91 – 14.70) *
Livestock meat	17.22(4.15 – 23.92)	13.88(2.13 – 59.88)	12.58(3.31 – 69.00)
Seafood	3.75(1.15 – 13.22)	1.13(0.00 – 11.94)	1.03(0.00 – 9.60)
Milk	87.50(44.94 – 241.07)	91.00(50.00 – 317.75)	50.88(16.06 – 178.94)
Beans	7.75(0.00 – 44.80)	10.87(0.00 – 44.25)	3.63(0.00 – 49.00)
Eggs	8.52(0.00 – 16.10)	10.42(0.66 – 39.74)	8.90(0.10 – 30.09)
Nuts	13.87(1.37 – 34.86)	9.78(1.49 – 29.58)	2.90(0.63 – 12.17)
Condiments	106.63(25.24 – 216.76)	61.13(17.13 – 145.93)	63.50(14.57 – 203.69)
Sweets	11.13(3.13 – 27.94)	9.75(0.32 – 40.19)	7.25(2.69 – 46.88)

(Condiments included salt, vinegar, monosodium glutamate, pepper, soy sauce, and mustard.

\*compared with the Tibetan,  $P < 0.05$ ;  $P$  value was calculated using Kruskal–Wallis rank sum test)

**Supplementary Table 2.** Energy and mean percentage of energy from macro-nutrients among the three ethnic groups.

Nutrient	Han (n = 20)	Tibetan (n = 20)	Hui (n = 20)
Energy (kcal)	1975.04 (981.77 – 2609.50)	2162.53 (1024.85 – 2861.62)	2034.99 (892.97 – 3842.89)
Protein (% energy)	13.45 (10.61 – 16.08)	13.13 (12.26 – 15.27)	13.13 (11.02 – 15.89)
Fat (% energy)	29.87 (25.66 – 40.27)	33.23 (28.85 – 39.08)	27.81 (15.87 – 36.60)
Carbohydrate (% energy)	55.32 (46.00 – 62.77)	51.55 (44.86 – 56.45)	61.46 (48.32 – 73.79)