

Gut microbiota insights into human adaption to high-plateau diet

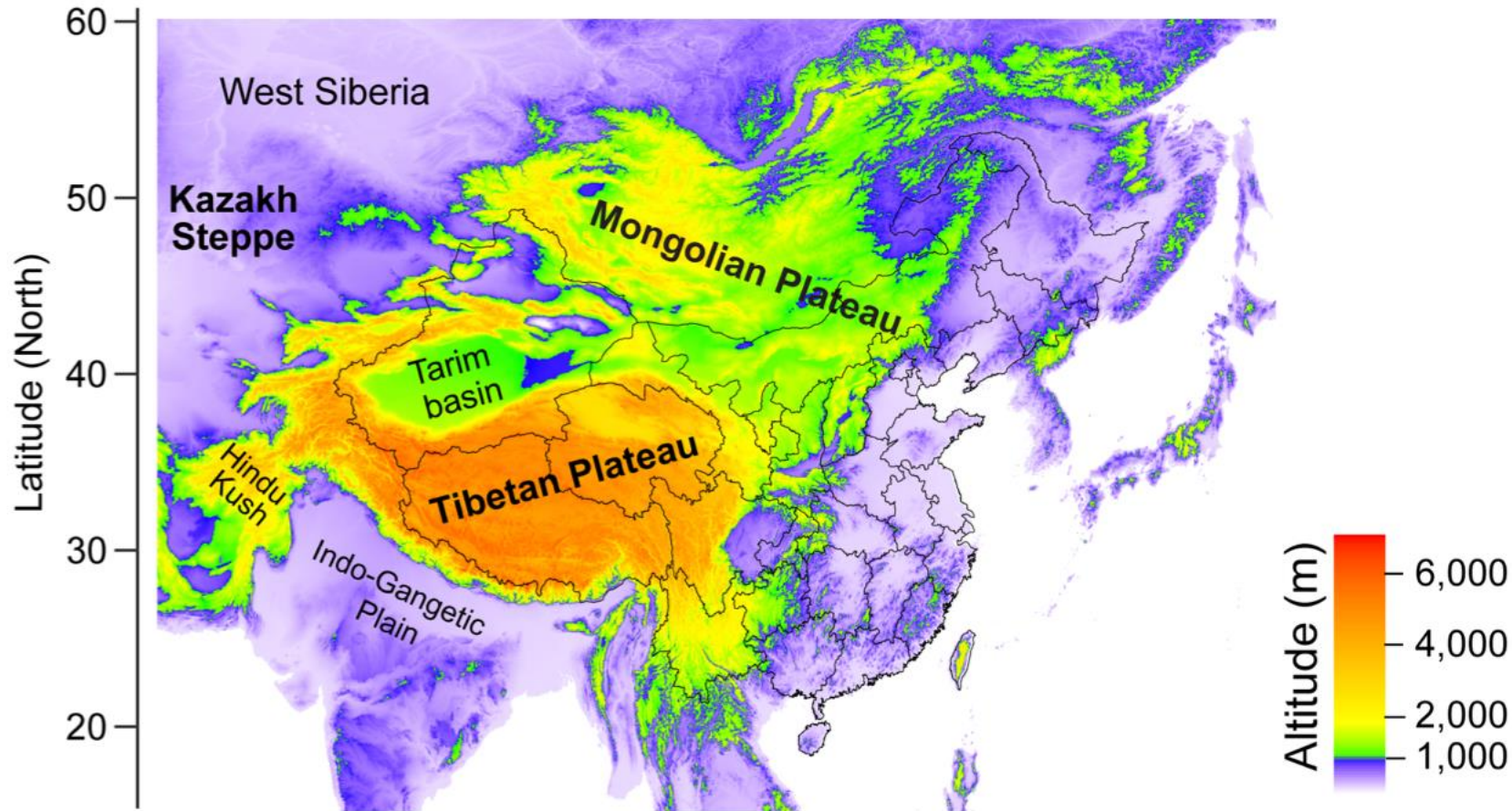
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Nomadic dietary pattern is associated with environment and lifestyle



Typical nomadic diets (low intake of vegetables & fruits)

Tibetan

- barley products
- butter tea
- milk products (fermented)
- milk products (non-fermented)
- yak meat

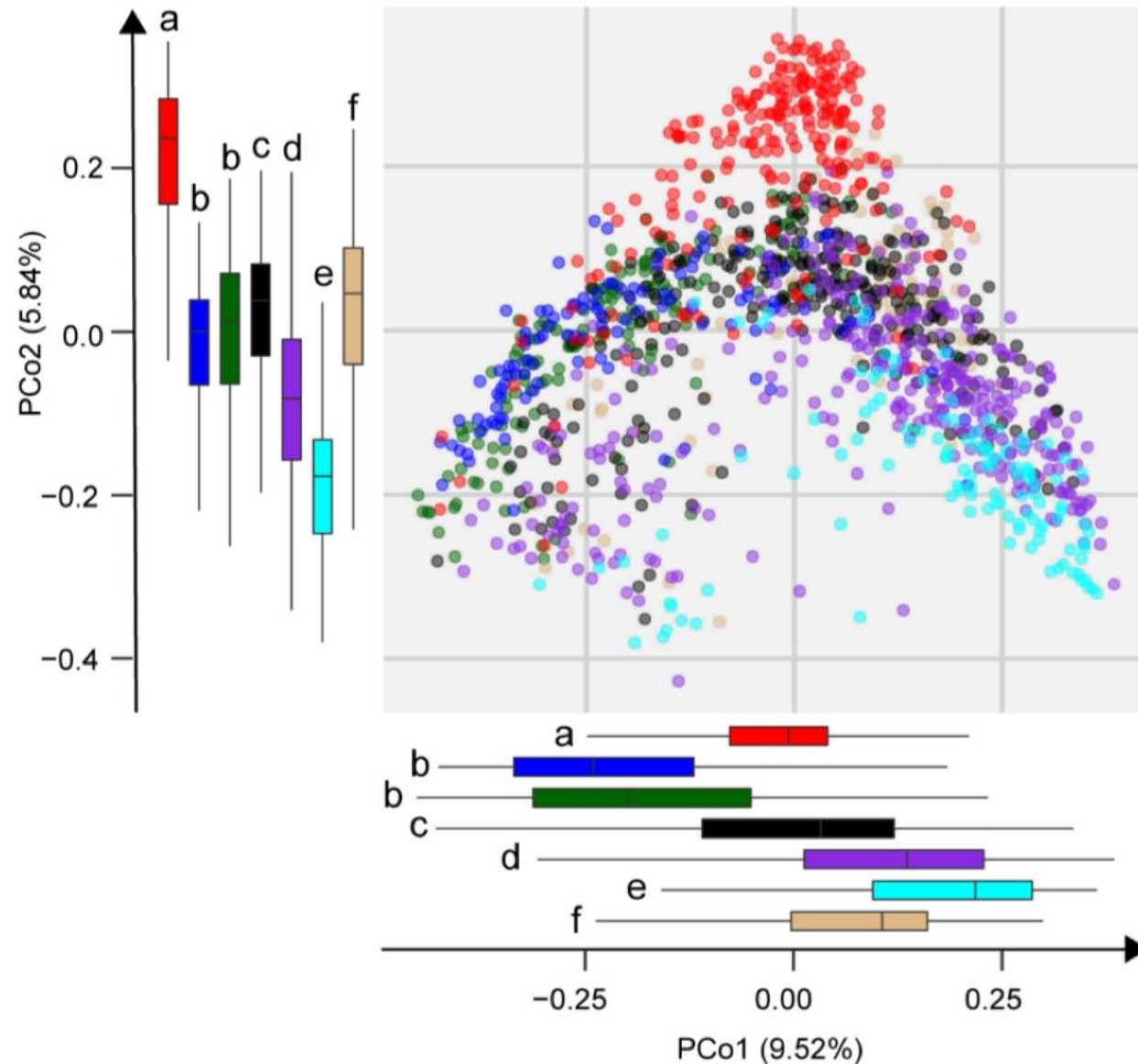
Mogolian

- millet products
- milk tea
- milk products (fermented)
- milk products (non-fermented)
- sheep/cow meat

Kazakh

- wheat products
- milk tea
- milk products (fermented)
- milk products (non-fermented)
- sheep/horse meat

Human stool microbiome of nomadic regions is different from low-altitude population



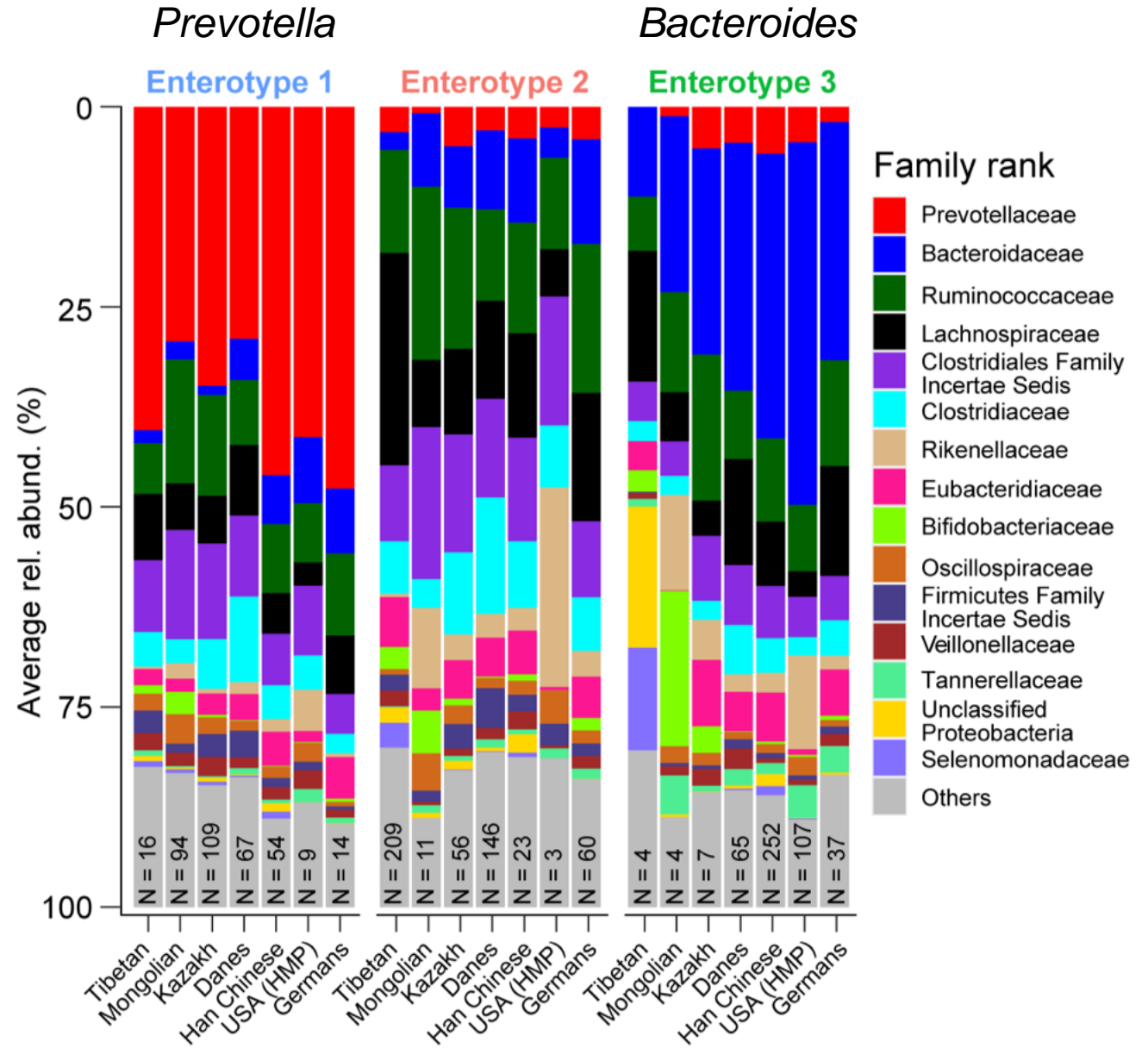
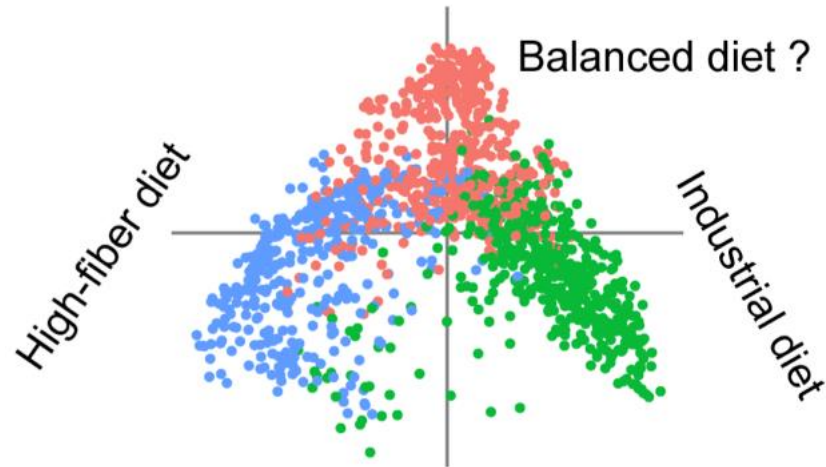
Shotgun metagenomic meta-analysis by mOTUs v2.6

Ethnicity

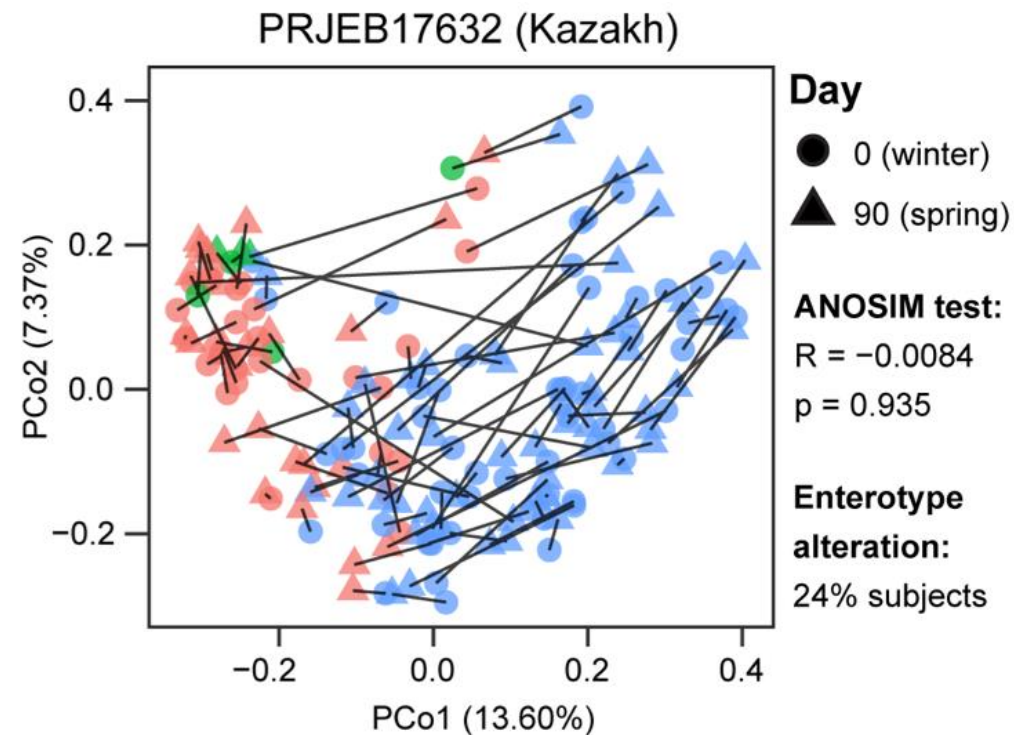
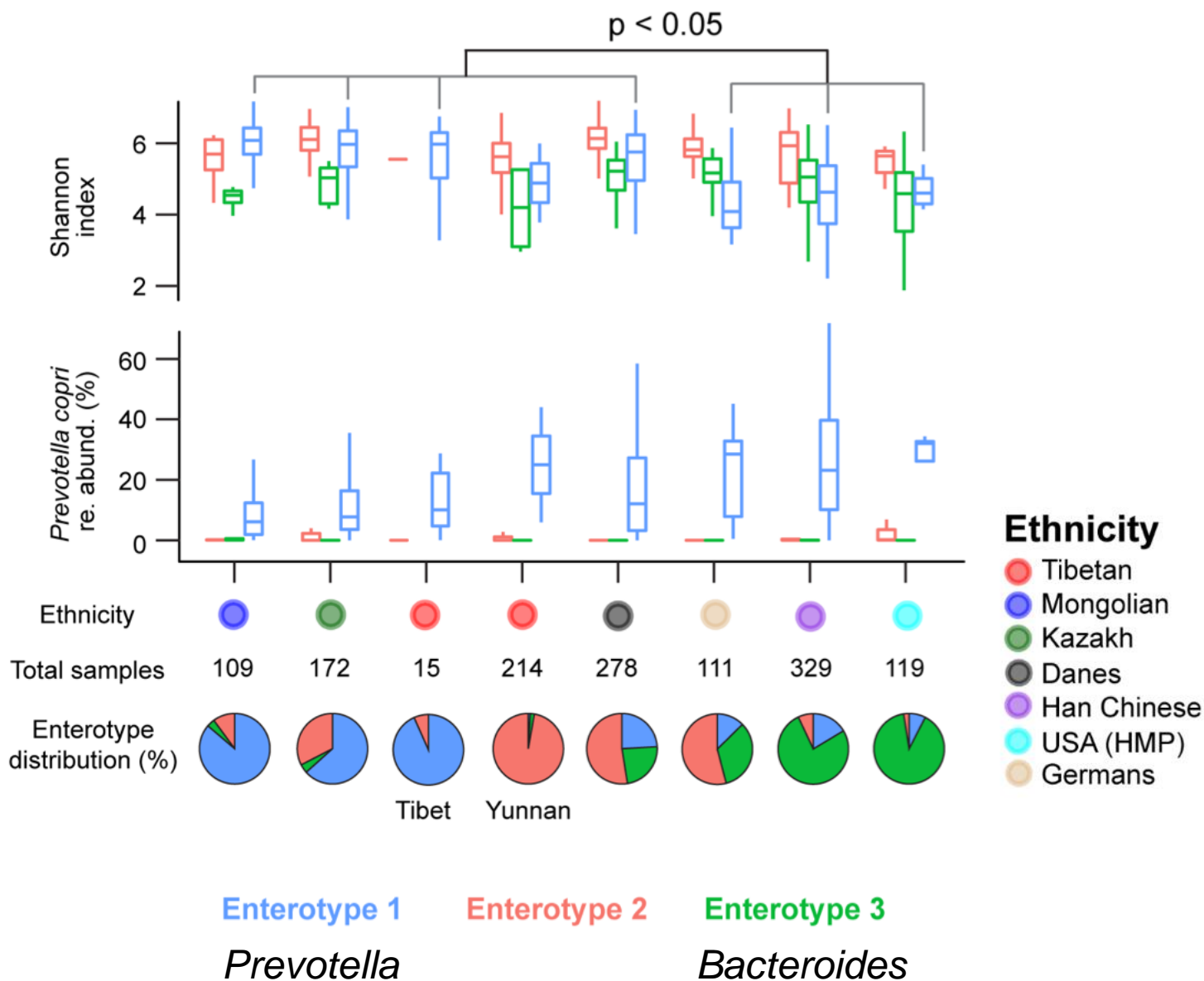
- Tibetan
- Mongolian
- Kazakh
- Danes
- Han Chinese
- USA (HMP)
- Germans

Lowercase (a-f) in the boxplot with no letters in common indicates a significant difference ($p < 0.05$) between any two groups.

Classical enterotyping of stool microbiome

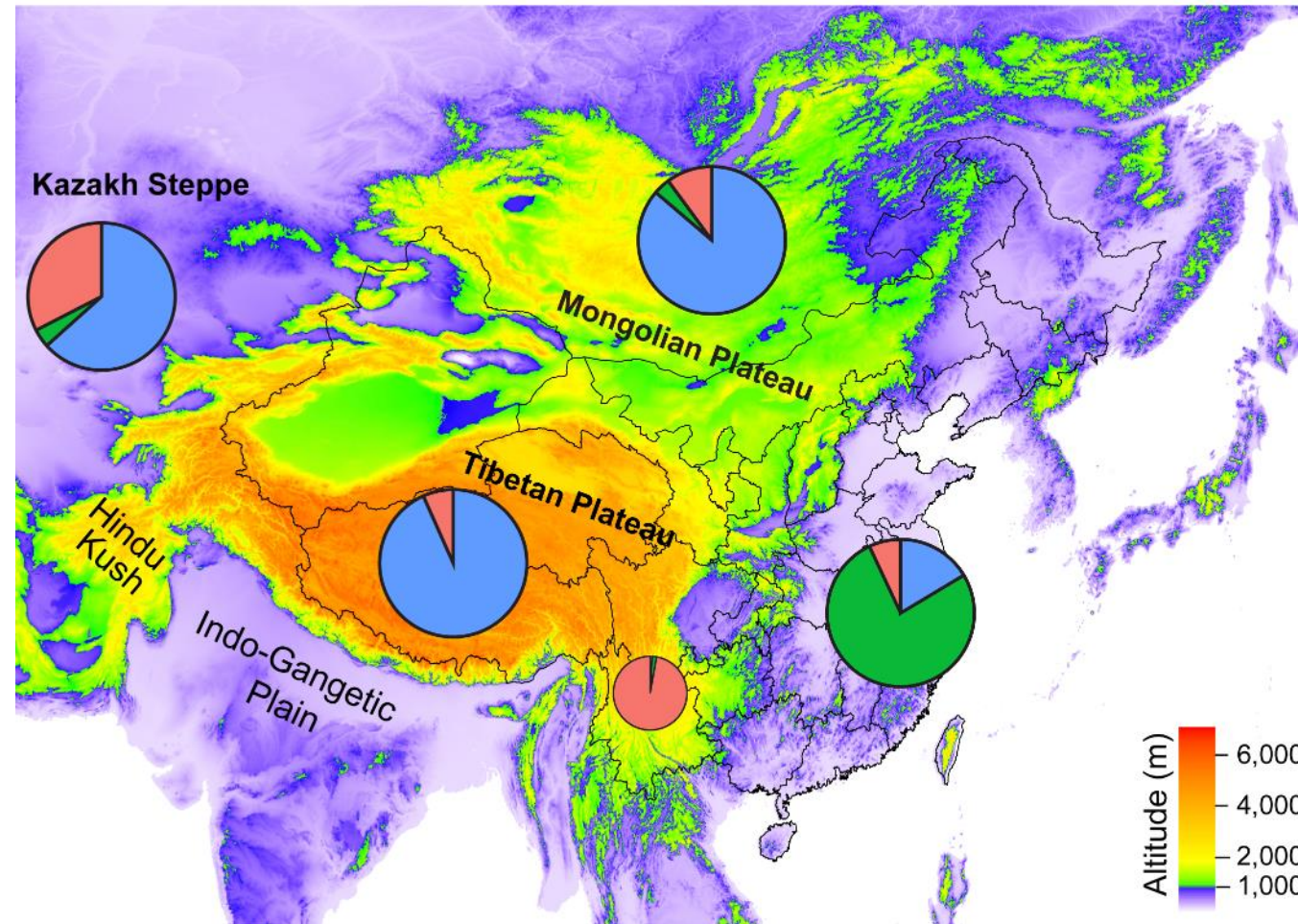


High prevalence of stable *Prevotella* enterotype with high microbial diversity in human stool microbiome of nomadic regions

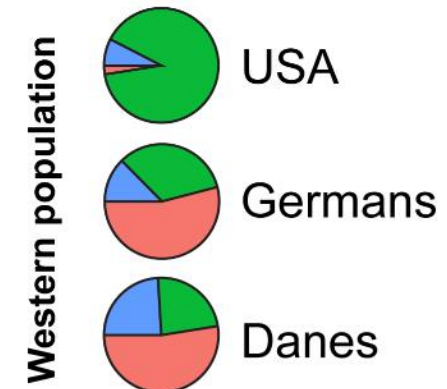
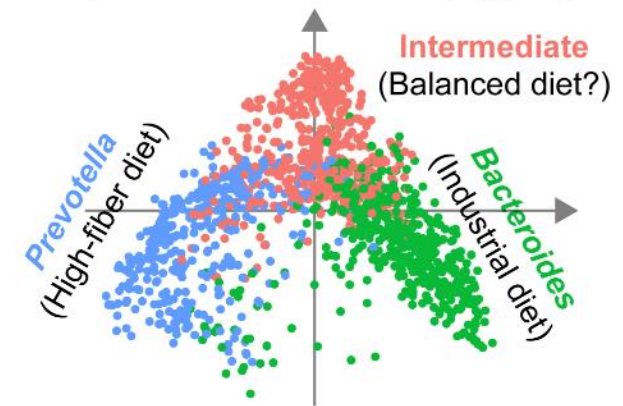


Summary

High prevalence of gut *Prevotella* enterotype in nomadic population



Population-scale enterotyping





Yina Huang, Jinxin Liu, Hein Min Tun, Catherine Stanton, Tingtao Chen, Hani El-Nezami, *et al.* 2022. Gut microbiota insights into human adaptation to high-plateau diet. *iMeta* 1: e6. <https://doi.org/10.1002/imt2.6>

iMeta: Integrated meta-omics to change the understanding of the biology and environment



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