Supplemental material

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Gut

Supplementary Figures

Supplementary figure 1. Workflow of the participant and sample selection in this study. Red box denotes the reasons why participants were excluded or samples were removed.

Supplementary figure 2. Same to Figure 3B, only the threshold for oral-to-gut transmission was set to 0.01 (METHODS).

Supplementary figure 3. (A) Heatmap showing the effect sizes (measured by Cohen's d) of the significantly altered species in the oral cavity after the administration of PPI and H2RA. Red tiles represent species enriched in oral samples after 7 days of intervention. The scatter plot illustrates the prevalence changes of significantly abundant species in the two groups following drug administration. (B) Comparison of the Bray-Curtis dissimilarity between salivary and fecal samples from the same subject before and after drug administration in two groups. The PPI group exhibited a more pronounced decrease in Bray-Curtis dissimilarity after drug use compared to the H2RA group (p=4.77e-06 in the PPI group; p=0.045 in the H2RA group). Wilcoxon rank-sum test was used to compare continuous variables between groups. NS.: not significant; *p < 0.05; **p < 0.01; ***p < 0.001; ****p < 0.0001.

Supplementary figure 4. (A) Box plot comparing the number and the total abundance of the species with oral-to-gut transmission in the gut between the PPI and H2RA group at baseline. There were no significant differences in both the numbers and total abundances of transmissible species in the baseline samples between the two drug groups (p=0.08; p=0.53). Wilcoxon rank-sum test was used to compare continuous variables between groups. NS.: not significant; *p < 0.05; **p < 0.01; ***p < 0.001; ****p < 0.0001. (B) Box plot comparing the number and the total abundance of the species with oral-to-gut transmission in the gut between the PPI and H2RA group after drug usage. Both indices exhibited significant differences between the two drug groups (p= 4.82e-05 for number of species and p=1.20e-03 for total abundance). Wilcoxon rank-sum test was used to compare continuous variables between groups. NS.: not significant; *p < 0.05; **p < 0.01; ***p < 0.001; ****p < 0.0001.