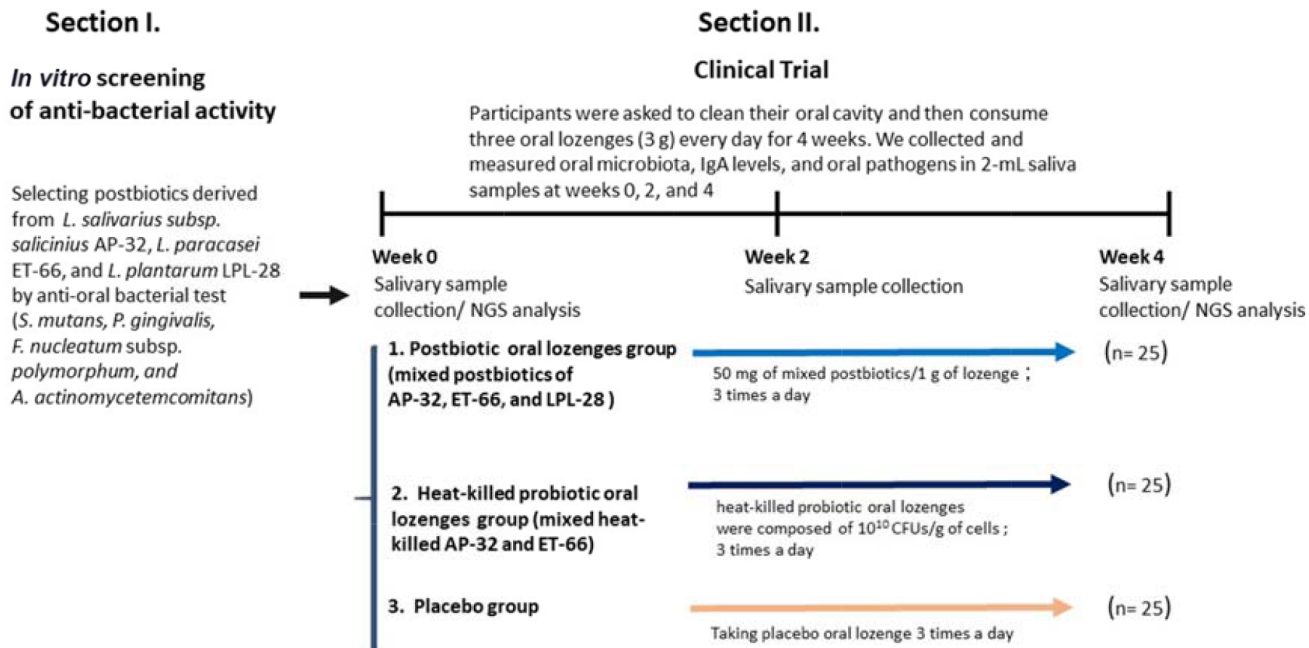
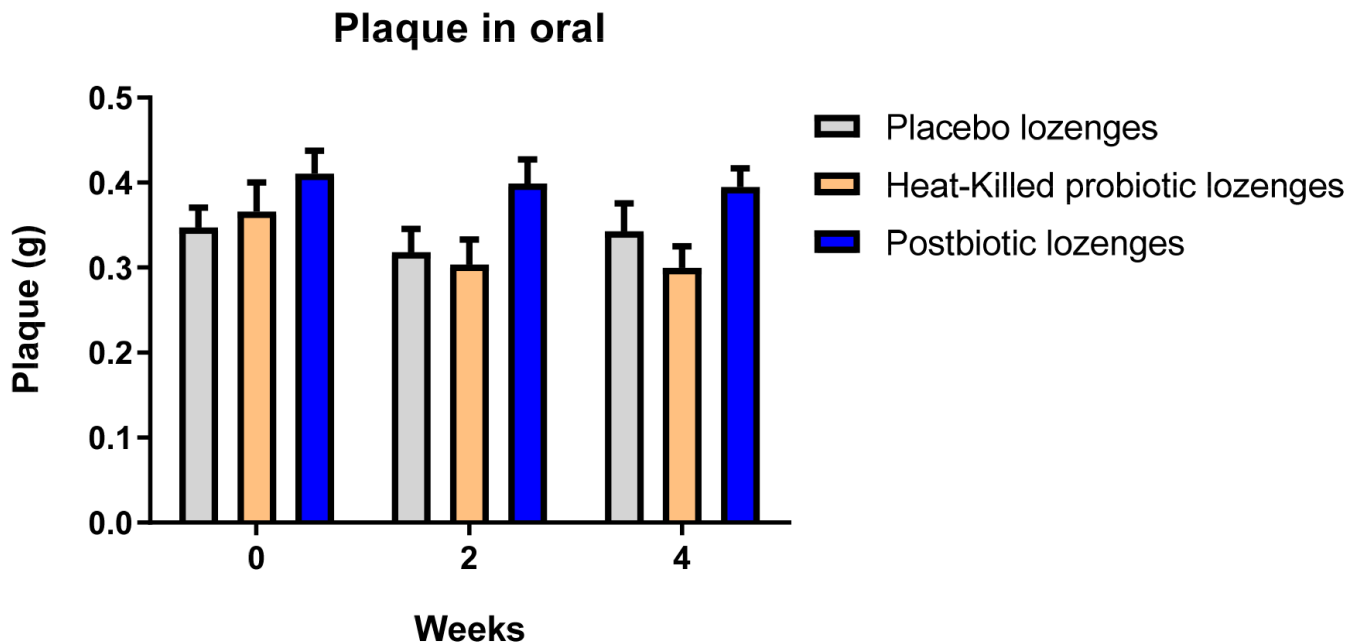


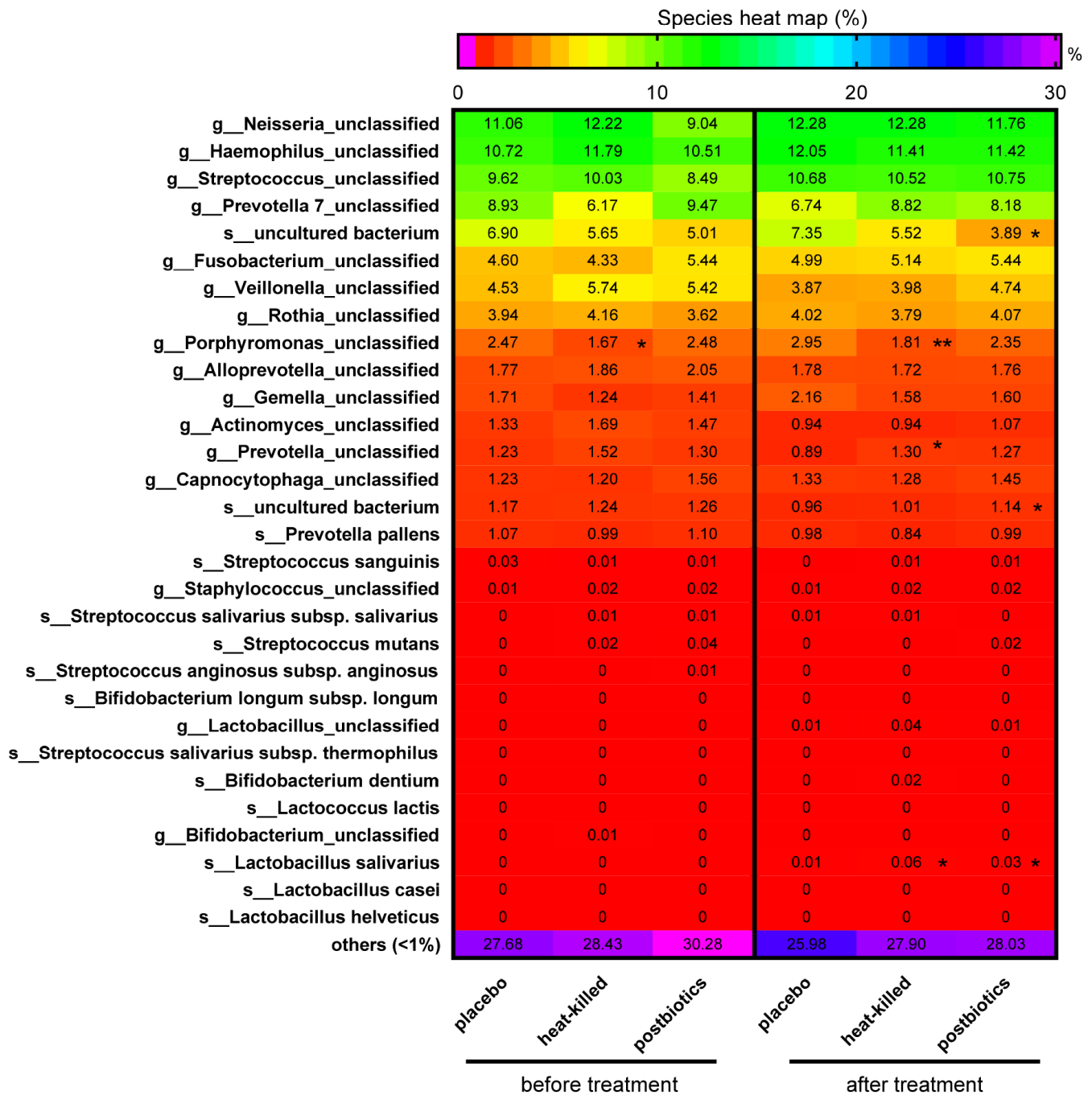
SUPPLEMENTARY FIGURES



Supplementary Figure 1. Experimental design.



Supplementary Figure 2. Plaque weight analyses. The oral lozenges contained postbiotics or heat-killed cells. Participants in the control group consumed placebo lozenges without the postbiotic content (no significant difference was observed between the groups). Data are presented as mean \pm SD.



Supplementary Figure 3. NGS for detecting changes in oral microbiota with the intervention of oral lozenges. Heatmap presents oral microbiota changes (genus, %) in participants' saliva before and after 4 weeks of consuming oral lozenge. Participants in the control group consumed placebo lozenges without the postbiotic content (*p < 0.05 and **p < 0.01 indicate significant change compared with the placebo group). Data are presented as means.