

**S5 Fig.** The gene order of F14 chemosensory class and flagellar locus in species of *Nitratiruptor* (*Campylobacterota*) and *Persephonella* (*Aquificota*). Ochre strips represent flagellar genes on the linearized genomes; the order of flagellar (orange arrow) and chemosensory gene (pink arrow) are depicted above; the grey lines link the same gene cluster from different genomes.