

*Porphyromonas gingivalis* is a keystone pathogen in the pathogenesis of periodontal disease. It produces several major virulence factors - such as lipopolysaccharides, proteins, and outer membrane vesicles (OMVs) - that can evade host immune defenses. These virulence factors assist *P. gingivalis* in the colonization of the host at a cellular level – such as biofilm dispersal - and are involved in the alteration of oral microbial community structure and destructive inflammation in the periodontal tissue.

Previous studies show that *P. gingivalis* WT 33277 and WT 381 strains are nearly genetically identical, however, they have significant differences in host immunological responses. These differences are thought to be correlated with strain-specific differences in virulence factors such as OMV abundance – in which WT 381 secretes more than WT 33277.

We hypothesized that a strain with higher OMV production (WT 381) would have greater biofilm dispersal.