4: Virulence of surface molecules

Bacterial surface molecules are sometimes associated with the adhesion to host tissues, antigenic ability and the resistant factors against host-derived antibacterial agents such as complement. We are studying surface molecules in *Aggregatibacter actinomycetemcomitans*, *Tannerella forsythia* and *Staphylococcus aureus*.

We previously identified 6 outer membrane proteins (Omps) in *A. actinomycetemcomitans*. Especially, We demonstrated one Omp designated as Omp100 is associated with adhesion or invasion to host cells, resistance to complement killing and induction of inflammatory cytokine expression. In *T. forsythia*, we identified that S-layer contributed to resistance to complement killing and co-aggregation with other oral bacteria. Also, we identified SasA of *S. aureus* which could bind to salivary agglutinin, gp340.

We are further investigating how these or other surface molecules are associated with bacterial infection in the host.