Ancestral *S. aureus*

Incorporation of ancestral SAgs by Tn, IS or bacteriophage

Acquisition of diversity in SAgs by Tn, IS or bacteriophage

Horizontal gene transfer of ancestral staphylococcal SAg

Replacement of speG by a 20 kb unique fragment

Common ancestor of GAS and SDSE

Speciation

Incorporation of ancestral SAgs by Tn, IS or bacteriophage

smez was lacked during massive genome rearrangement