

Nasal swab

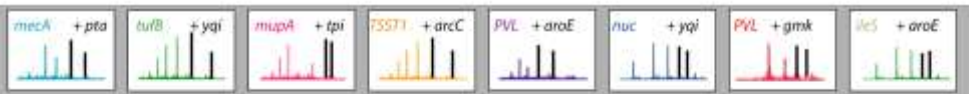
Isolated DNA

Characterization + Genotyping

- | | | |
|---|-----------------|---------------|
| Methicillin resistance | <i>mecA</i> | + <i>pta</i> |
| <i>Staphylococcus</i> speciation | <i>tufB</i> | + <i>yqi</i> |
| Mupirocin resistance plasmid | <i>mupA</i> | + <i>tpi</i> |
| Toxic shock gene | <i>TSST1</i> | + <i>arcC</i> |
| PVL and α -hemolysin genes | <i>PVL/hukD</i> | + <i>aroE</i> |
| <i>S. aureus</i> specific nuclease gene | <i>nuc</i> | + <i>yqi</i> |
| PVL SNP for R or H type | <i>PVL/hukD</i> | + <i>gmk</i> |
| Mupirocin resistance | <i>mec5</i> | + <i>aroE</i> |

PCR
Desalting

Mass Spectrometer



A22 Q11 C21 T21	A43 Q28 C19 T35	A35 Q27 C17 T25	A39 Q20 C17 T25	A46 Q19 C17 T35	A42 Q20 C19 T25	A46 Q21 C17 T31	A33 Q07 C15 T23
A31 Q28 C22 T28	A41 Q37 C22 T41	A32 Q25 C22 T25	A49 Q26 C20 T33	A39 Q24 C18 T21	A37 Q30 C18 T37	A50 Q30 C20 T32	A40 Q38 C13 T43

MRSA PVL+
mupA+ TSST+
CC 8 / USA300

Base composition signature
comparison to known USA genotypes
and characterization genes



Strain types identified