**Figure S1** The information and statistics of MLST typing, CC typing and BAPS of 332 *Staphylococcus aureus* strains. Different Groups was labeled on left and different sub-Groups was labeled on right.

**Figure S2** Core-genome analysis of each sub-Group based on KEGG annotation. The histogram represented the gene-number of each KEGG pathway and the color of each
sub-Group corresponded to the branch color on the tree. The line chart colored in darkred was represented the RER values of each KEGG pathway. *: Fisher’s exact test P-value < 0.05, **: Fisher’s exact test P-value < 0.01. Detailed information on the KEGG pathway was shown at the bottom.