



Government of India  
Ministry of Science & Technology  
Department of Biotechnology

सत्यमेव जयते



# ONE DAY ONE GENOME

*Staphylococcus aureus*



**It is one of  
the major  
pathogens  
of food  
poisoning &  
mastitis in  
milking  
animals**

Staphylococcus aureus

Genome Accession Number: INRP000199

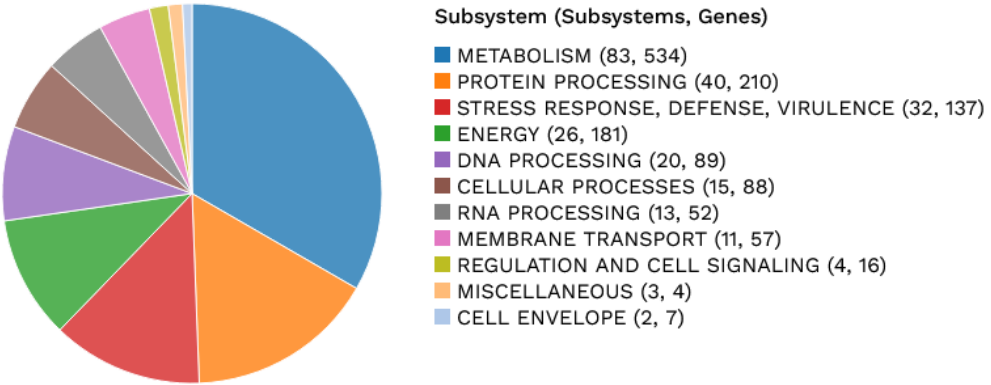
Quality of Genome Assembly and Annotation:

Results from indigenously developed **BHARAT** analysis pipeline: (**B**acterial **H**ybrid genome **A**ssembly and **R**apid **A**nnotation **T**oolset)

| Table 1: Assembly Details |              |
|---------------------------|--------------|
| Contigs                   | 39           |
| GC Content                | 32.73        |
| Contig L50                | 6            |
| Genome length             | 2,732,334 bp |
| Contig N50                | 170,521      |

| Table 2: Annotated Genome Features |       |
|------------------------------------|-------|
| CDS                                | 2,593 |
| tRNA                               | 55    |
| rRNA                               | 4     |

Subsystem Analysis



| Table 3: Antimicrobial Resistance Genes                            |                                                                                                                   |
|--------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| AMR Mechanism                                                      | Genes                                                                                                             |
| Antibiotic inactivation enzyme                                     | FosB                                                                                                              |
| Antibiotic resistance gene cluster,cassette,or operon              | TcaA, TcaB, TcaB2, TcaR                                                                                           |
| Antibiotic target in susceptible species                           | Alr, Ddl, EF-G, EF-Tu, folA, Dfr, folP, gyrA, gyrB, inhA, fabI, Iso-tRNA, kasA, MurA, rho, rpoB, rpoC, S10p, S12p |
| Protein altering cell wall charge conferring antibiotic resistance | GdpD, PgsA, MprF                                                                                                  |
| Efflux pump conferring antibiotic resistance                       | BceA, BceB, NorA, Tet(38)                                                                                         |
| Gene conferring resistance via absence                             | gidB                                                                                                              |
| Regulator modulating expression of antibiotic resistance genes     | BceR, BceS, LiaF, LiaR, LiaS                                                                                      |

Genome Assembly

