



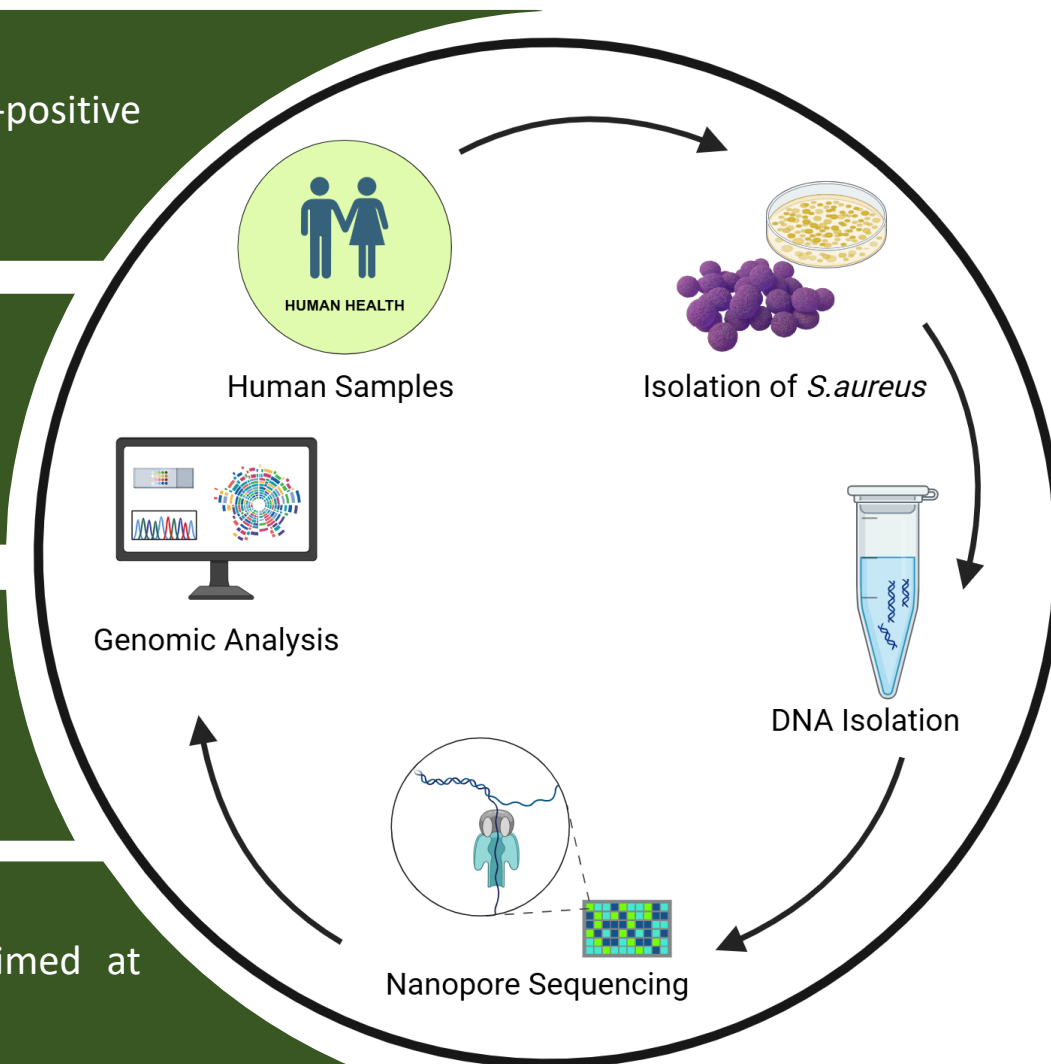
Genome of the Day: *Staphylococcus aureus* S145

Staphylococcus aureus is an opportunistic, high priority Gram-positive pathogen

Understanding the evolution of resistance in *Staphylococcus aureus*

Isolation and genomic characterisation of multidrug-resistant strains of *Staphylococcus aureus* from clinical isolates

The findings will inform public health strategies and policies aimed at controlling the spread of multidrug-resistant *Staphylococcus aureus*



Staphylococcus aureus (S145)

Genome Accession Number: JAJTJT000000000 (SAMN24290962)

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)

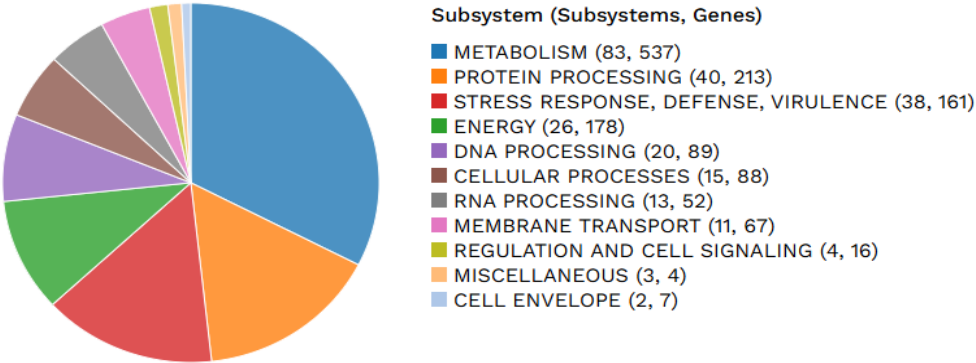
Table 1: Assembly Details	
Contigs	3
GC Content	32.82
Contig L50	1
Genome length	2,779,733 bp
Contig N50	2,746,753

Table 2: Annotated Genome Features	
CDS	2,579
tRNA	60
Repeat Regions	72
rRNA	19

Table 3: Predicted Antimicrobial Resistance Phenotypes	
	Antibiotics
Resistant	Ciprofloxacin, Erythromycin, Methicillin, Penicillin
Susceptible	Clindamycin, Gentamicin, Tetracycline, Trimethoprim/Sulfamethoxazole

Table 4: Antimicrobial Resistance Genes	
AMR Mechanism	Genes
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
Antibiotic inactivation enzyme	ANT(6)-I, APH(3')-III/APH(3')-IV/APH(3')-VI/APH(3')-VII, BlaZ family, FosB, Mph(C) family
Antibiotic resistance gene cluster, cassette, or operon	TcaA, TcaB, TcaB2, TcaR
Protein altering cell wall charge conferring antibiotic resistance	GdpD, MprF, PgsA
Efflux pump conferring antibiotic resistance	BceA, BceB, NorA, Tet(38)
Regulator modulating expression of antibiotic resistance genes	BceR, BceS, LiaF, LiaR, LiaS

Subsystem Analysis



Genome Assembly

