



Government of India
Ministry of Science & Technology
Department of Biotechnology



One Day One Genome

Staphylococcus saprophyticus



Isolated from sewage water causes UTIs &
carries multiple AMR genes

Staphylococcus saprophyticus

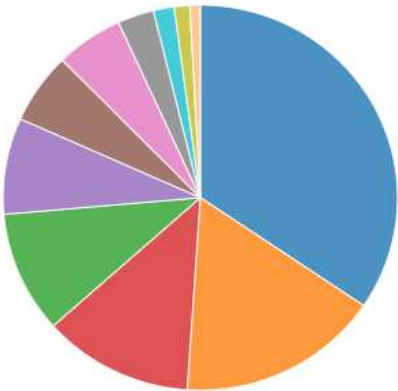
Genome Accession Number: INS0022356

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	4
GC Content	33.07
Contig L50	1
Genome length	2,672,715 bp
Contig N50	2,503,132

Table 2: Annotated Genome Features	
CDS	3,179
tRNA	59
Repeat Regions	38
rRNA	19



Subsystem Analysis

Subsystem (Subsystems, Genes)	
METABOLISM	(81, 641)
PROTEIN PROCESSING	(39, 240)
STRESS RESPONSE, DEFENSE, VIRULENCE	(29, 157)
ENERGY	(24, 215)
DNA PROCESSING	(19, 117)
CELLULAR PROCESSES	(14, 93)
RNA PROCESSING	(13, 60)
MEMBRANE TRANSPORT	(7, 38)
MISCELLANEOUS	(4, 13)
REGULATION AND CELL SIGNALING	(3, 20)
CELL ENVELOPE	(2, 9)

Table 3: Antimicrobial Resistance Genes	
AMR Mechanism	Genes
Antibiotic resistance gene cluster,cassette,or operon	TcaA, TcaB, TcaB2, TcaR
Antibiotic target modifying enzyme	Erm(43)/Erm(44)
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, MprF, PgsA
Efflux pump conferring antibiotic resistance	BceA, NorA, Tet(K), YkkCD
Regulator modulating expression of antibiotic resistance genes	BceR, BceS, LiaF, LiaR, LiaS

Genome Assembly

