



Government of India
Ministry of Science & Technology
Department of Biotechnology



One Day One Genome

Staphylococcus haemolyticus



Isolated from a diabetic foot ulcer, genomic insights of strain will aid resistance tracking and therapeutic planning

Quality of Genome Assembly and Annotation:

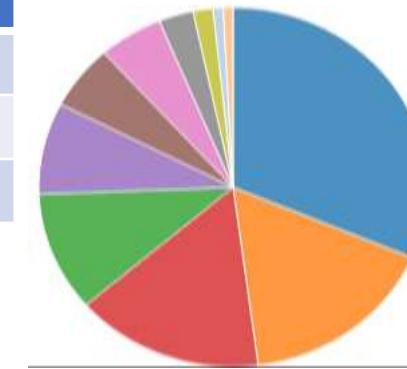
Results from indigenously developed **BHARAT** analysis pipeline: (**Bacterial Hybrid genome Assembly and Rapid Annotation Toolset**)

Table 1: Assembly Details

Contigs	115
GC Content	32.61
Contig L50	12
Genome length	2,517,152 bp
Contig N50	55,179

Table 2: Annotated Genome Features

CDS	2,483
tRNA	59
rRNA	3



Subsystem Analysis

Subsystem (Subsystems, Genes)	Count
METABOLISM (76, 503)	76, 503
PROTEIN PROCESSING (40, 216)	40, 216
STRESS RESPONSE, DEFENSE, VIRULENCE (38, 153)	38, 153
ENERGY (26, 197)	26, 197
DNA PROCESSING (20, 93)	20, 93
CELLULAR PROCESSES (14, 90)	14, 90
RNA PROCESSING (13, 51)	13, 51
MEMBRANE TRANSPORT (7, 44)	7, 44
REGULATION AND CELL SIGNALING (4, 16)	4, 16
CELL ENVELOPE (2, 7)	2, 7
MISCELLANEOUS (2, 5)	2, 5

Table 3: Antimicrobial Resistance Genes

AMR Mechanism	Genes
Antibiotic inactivation enzyme	ANT(6)-I, APH(3')-III/APH(3')-IV/APH(3')-VI/APH(3')-VII, BlaZ family
Antibiotic target protection protein	Lsa(B)
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
Gene conferring resistance via absence	gidB
Protein altering cell wall charge conferring antibiotic resistance	GdpD, MprF, PgsA
Efflux pump conferring antibiotic resistance	BceA, BceB, NorA, YkkCD
Regulator modulating expression of antibiotic resistance genes	BceR, BceS, LiaF, LiaR, LiaS

Genome Assembly

