



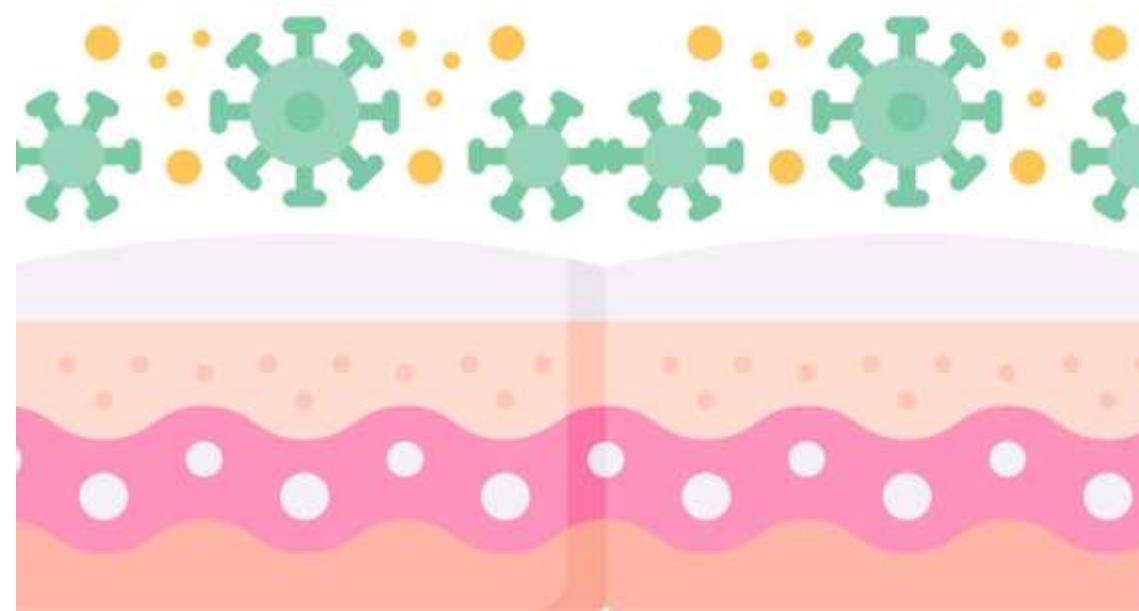
Government of India
Ministry of Science & Technology
Department of Biotechnology



ONE DAY ONE GENOME

Staphylococcus hominis

It helps in maintaining skin barrier integrity
by killing opportunistic bacteria



Quality of Genome Assembly and Annotation:

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

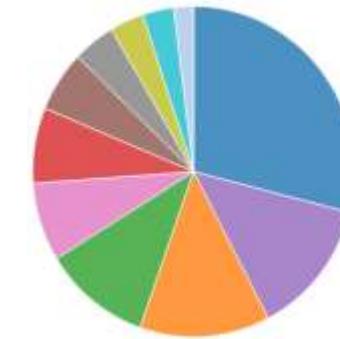
Table 1: Assembly Details

Contigs	144
GC Content	36.03
Contig L50	11
Genome length	8,011,753 bp
Contig N50	267,403

Table 2: Annotated Genome Features

CDS	7,764
tRNA	148
Repeat Regions	21
rRNA	13

Subsystem Analysis



Subsystem (Subsystems, Genes)
METABOLISM (102, 1402)
STRESS RESPONSE, DEFENSE, VIRULENCE (47, 293)
PROTEIN PROCESSING (46, 548)
ENERGY (38, 532)
MEMBRANE TRANSPORT (27, 177)
CELLULAR PROCESSES (26, 325)
DNA PROCESSING (21, 232)
RNA PROCESSING (15, 142)
CELL ENVELOPE (12, 96)
MISCELLANEOUS (11, 74)
REGULATION AND CELL SIGNALING (7, 44)

Table 3: Antimicrobial Resistance Genes

AMR Mechanism	Genes
Antibiotic inactivation enzyme	BlaZ family, CatA1/CatA4 family, Mph(C) family, Mph(E)/Mph(G) family
Antibiotic target protection protein	BcrC, Lsa(A), Msr(A), QnrB family, Tet(M)
Antibiotic target in susceptible species	Alr, Ddl, dxr, 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	AcrAB-TolC, AcrZ, BceA, BceB, EmrAB-TolC, MacA, MacB, MdtABC-TolC, MdtL, MexHI-OpmD, NorA, QacE, SugE, Tet(J), Tet(L), TolC/OpmH, YkkCD
Regulator modulating expression of antibiotic resistance genes	AcrAB-TolC, BceR, BceS, EmrAB-TolC, H-NS, LiaF, LiaR, LiaS, OxyR

Genome Assembly

