जैव प्रौद्योगिकी विभाग
Department of Biotechnology
Ministry of Science & Technology
Government of India
सत्यमेव जयते

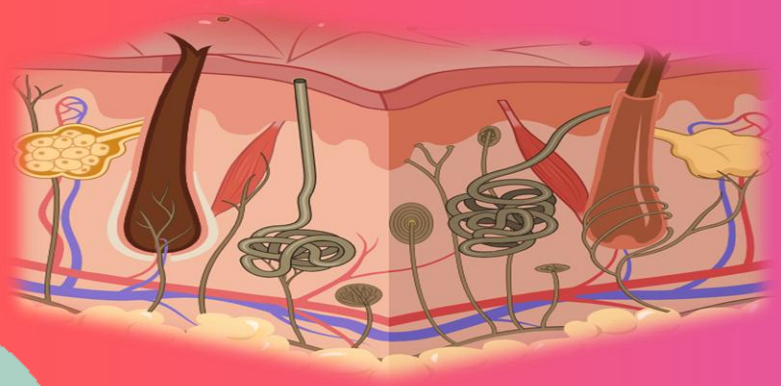
One Day One Genome

BRIC a DBT Organization
NIBMG
राष्ट्रीय जैवचिकित्सा जीनोमिक्स संस्थान
National Institute of Biomedical Genomics

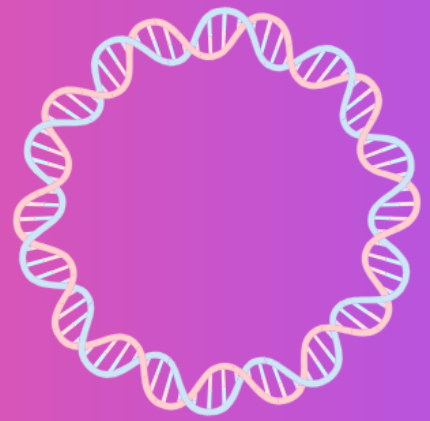
Staphylococcus epidermidis (NIBMG_HMR_19)

Beneficial Bacteria of Human Skin

Isolated from Healthy Human Skin



- ✓ Protects against Pathogenic Bacteria
- ✓ Produces Antimicrobial Peptides
- ✓ Modulate Immunity
- ✓ Helps in Wound Healing



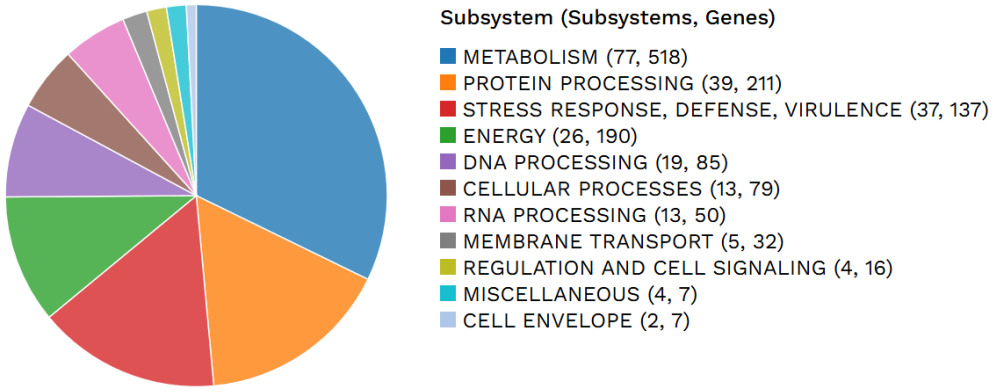
Staphylococcus epidermidis (NIBMG_HMR_19) Genome Accession Number: INS0009755

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	47
GC Content	32.05
Contig L50	6
Genome length	2,465,463 bp
Contig N50	129,718

Table 2: Annotated Genome Features	
CDS	2,379
tRNA	53
rRNA	4
Repeat Regions	0

Subsystem Analysis



Genome Assembly

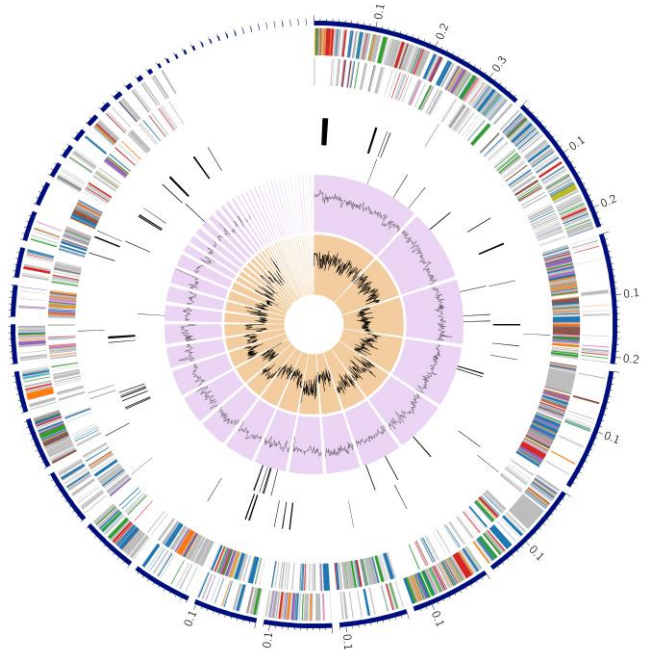


Table 3: Antimicrobial Resistance Genes	
AMR Mechanism	**Genes**
Antibiotic inactivation enzyme	APH(3')-III/APH(3')-IV/APH(3')-VI/APH(3')-VII, BlaZ family, CatA7 family, FosB, Mph(C) family
Antibiotic resistance gene cluster, cassette, or operon	TcaA, TcaB, TcaB2, TcaR
Antibiotic target in susceptible species	Alr, Ddl, EF-G, EF-Tu, folA, Dfr, folP, gyrA, gyrB, inhA, fabI, Iso-tRNA, kasA, MurA, rho, rpoB, rpoC, S10p, S12p
Efflux pump conferring antibiotic resistance	BceA, BceB, NorA, YkkCD
Protein altering cell wall charge conferring antibiotic resistance	GdpD, MprF, PgsA