



Government of India
Ministry of Science & Technology
Department of Biotechnology

BRIC
a DBT Organization

NIBMG

राष्ट्रीय जैवप्रिविद्या
जीनोमिक्स संस्थान
National Institute of
Biomedical Genomics

One Day One Genome

Corynebacterium sp.



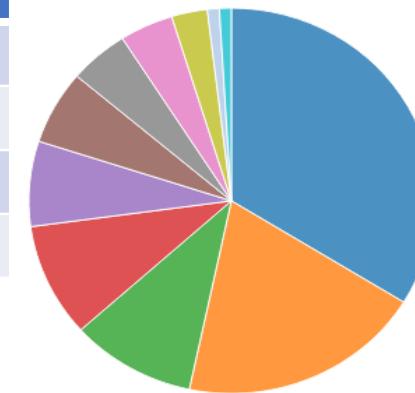
PROMOTES SKIN HEALTH BY MAINTAINING
MICROBIAL HOMEOSTASIS

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	21
GC Content	60.00
Contig L50	2
Genome length	2,642,658 bp
Contig N50	652,881

Table 2: Annotated Genome Features

CDS	2,455
tRNA	54
Repeat Regions	12
rRNA	3

Subsystem Analysis**Subsystem (Subsystems, Genes)**

- METABOLISM (71, 430)
- PROTEIN PROCESSING (41, 198)
- ENERGY (21, 129)
- STRESS RESPONSE, DEFENSE, VIRULENCE (20, 71)
- DNA PROCESSING (15, 58)
- CELLULAR PROCESSES (13, 48)
- RNA PROCESSING (10, 33)
- MEMBRANE TRANSPORT (9, 36)
- CELL ENVELOPE (6, 27)
- REGULATION AND CELL SIGNALING (2, 5)
- MISCELLANEOUS (2, 6)

Table 3: Antimicrobial Resistance Genes

AMR Mechanism	Genes
Antibiotic inactivation enzyme	APH(3")-I, APH(3')-I, APH(6)-Ic/APH(6)-Id
Antibiotic target in susceptible species	Alr, Ddl, dxr, EF-G, EF-Tu, folA, Dfr, folP, gyrA, gyrB, Iso-tRNA, MurA, rho, rpoB, rpoC, S10p, S12p
Antibiotic target modifying enzyme	Erm(X)
Antibiotic target replacement protein	FabG
Gene conferring resistance via absence	gidB
Protein altering cell wall charge conferring antibiotic resistance	GdpD, PgsA

Genome Assembly