



Government of India
Ministry of Science & Technology
Department of Biotechnology

BRIC
a DBT Organization
NIBMG
राष्ट्रीय बीमिकल जॉनोमिक्स इनसिट्यूट
National Institute of
Biomedical Genomics

one day one genome

Brachybacterium sp



beneficial roles



nitrogen
metabolism



ph



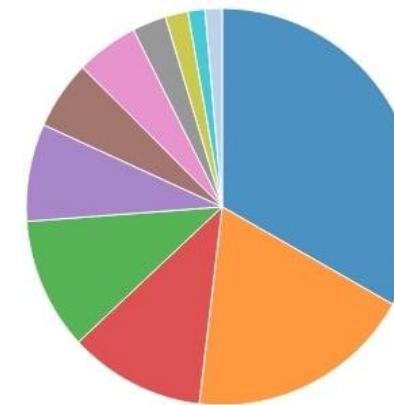
skin microbe
interaction

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	29
GC Content	72.17
Contig L50	5
Genome length	3,901,622 bp
Contig N50	306,817

Table 2: Annotated Genome Features

CDS	3,666
tRNA	52
Repeat Regions	0
rRNA	2

**Subsystem Analysis**

Subsystem (Subsystems, Genes)
METABOLISM (71, 435)
PROTEIN PROCESSING (40, 224)
STRESS RESPONSE, DEFENSE, VIRULENCE (24, 109)
ENERGY (23, 141)
DNA PROCESSING (17, 61)
CELLULAR PROCESSES (12, 56)
RNA PROCESSING (11, 44)
MEMBRANE TRANSPORT (6, 31)
CELL ENVELOPE (4, 9)
REGULATION AND CELL SIGNALING (3, 9)
MISCELLANEOUS (3, 8)

Table 3: Antimicrobial Resistance Genes

AMR Mechanism	Genes
Antibiotic target in susceptible species	Alr, Ddl, dxr, EF-G, EF-Tu, folA, Dfr, folP, gyrA, gyrB, Iso-tRNA, kasA, MurA, rho, rpoB, rpoC, S10p, S12p
Antibiotic target modifying enzyme	Erm(36)
Antibiotic target replacement protein	FabG, FabL-like, HtdX
Gene conferring resistance via absence	gidB
Protein altering cell wall charge conferring antibiotic resistance	GdpD, PgsA

Genome Assembly