



Government of India
Ministry of Science & Technology
Department of Biotechnology

सर्वानन्द भवति



BRIC
a DBT Organization



NCCS
National Center for Cell Science

ONE DAY ONE GENOME

Neopusillimonas aestuarii

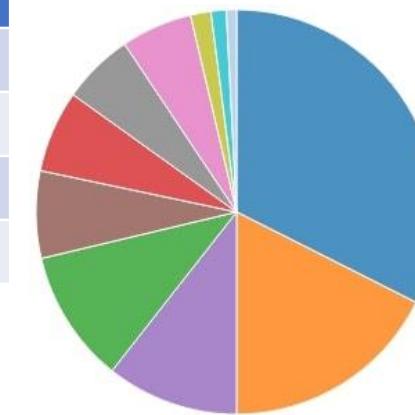


The microbe enriches climate-resilient biotechnology

Quality of Genome Assembly and Annotation:Results from indigenously developed **BHARAT** analysis pipeline: (**Bacterial Hybrid genome Assembly and Rapid Annotation Toolset**)**Subsystem Analysis**

Table 1: Assembly Details	
Contigs	1
GC Content	53.25
Contig L50	1
Genome length	3,191,899 bp
Contig N50	3,191,899

Table 2: Annotated Genome Features	
CDS	3,074
tRNA	44
Repeat Regions	17
rRNA	9



Subsystem (Subsystems, Genes)

- METABOLISM (79, 505)
- PROTEIN PROCESSING (43, 214)
- STRESS RESPONSE, DEFENSE, VIRULENCE (26, 105)
- ENERGY (26, 204)
- DNA PROCESSING (17, 71)
- CELLULAR PROCESSES (16, 116)
- RNA PROCESSING (14, 47)
- MEMBRANE TRANSPORT (14, 47)
- CELL ENVELOPE (4, 20)
- MISCELLANEOUS (3, 12)
- REGULATION AND CELL SIGNALING (2, 5)

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, inhA, fabI, Iso-tRNA, kasA, MurA, rho, rpoB, rpoC, S10p, S12p
Efflux pump conferring antibiotic resistance	MdtABC-OMF, MdtABC-TolC
Gene conferring resistance via absence	gidB
Protein altering cell wall charge conferring antibiotic resistance	PgsA
Regulator modulating expression of antibiotic resistance genes	OxyR

Genome Assembly