



ONE DAY ONE GENOME

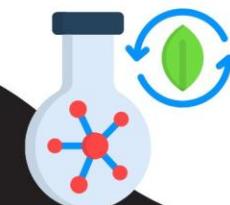
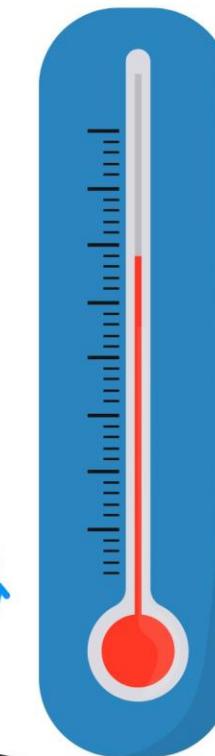
Anoxybacillus suryakundensis novel sp.

Applications in Industrial Biotechnology

Thermostable
hydrolases

Use in high-temperature
processes

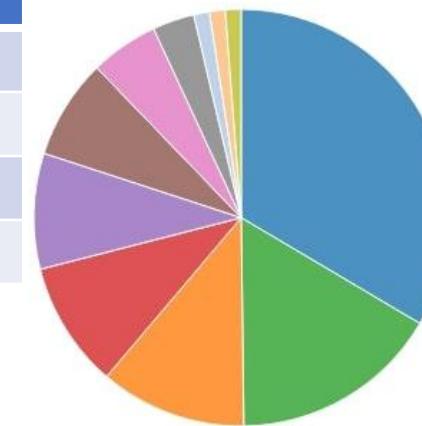
Waste treatment
by bioremediation



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	41
GC Content	41.51
Contig L50	7
Genome length	2,594,657 bp
Contig N50	169,221

Table 2: Annotated Genome Features	
CDS	2,775
tRNA	62
Repeat Regions	50
rRNA	10



Subsystem (Subsystems, Genes)

- METABOLISM (82, 616)
- PROTEIN PROCESSING (40, 201)
- CELLULAR PROCESSES (28, 235)
- ENERGY (24, 181)
- STRESS RESPONSE, DEFENSE, VIRULENCE (22, 83)
- DNA PROCESSING (19, 79)
- RNA PROCESSING (13, 52)
- MEMBRANE TRANSPORT (8, 38)
- CELL ENVELOPE (3, 5)
- MISCELLANEOUS (3, 5)
- REGULATION AND CELL SIGNALING (3, 9)

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
Antibiotic activation enzyme	KatG
Gene conferring resistance via absence	gidB
Protein altering cell wall charge conferring antibiotic resistance	GdpD, PgsA

Genome Assembly