



Government of India  
Ministry of Science & Technology  
Department of Biotechnology  
संवर्धन व विजय

BRIC  
a DBT Organization  
NCCS  
NATIONAL CENTRE FOR CELL SCIENCE

# ONE DAY ONE GENOME

## *Alkalihalobacterium chitinilyticum*



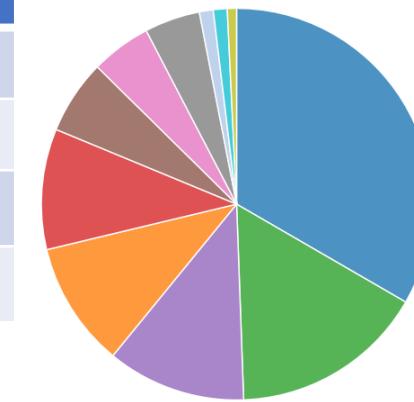
**USED IN DETERGENT FORMULATIONS AND  
OTHER INDUSTRIAL PROCESSES REQUIRING  
ENZYMES THAT FUNCTION IN HIGH PH  
ENVIRONMENTS**

**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	49
GC Content	37.70
Contig L50	7
Genome length	4,882,427 bp
Contig N50	231,606

**Table 2: Annotated Genome Features**

CDS	4,854
tRNA	158
Repeat Regions	7
rRNA	26

**Subsystem Analysis**

Subsystem (Subsystems, Genes)
METABOLISM (87, 711)
PROTEIN PROCESSING (42, 232)
STRESS RESPONSE, DEFENSE, VIRULENCE (30, 137)
CELLULAR PROCESSES (27, 237)
ENERGY (26, 232)
DNA PROCESSING (16, 70)
RNA PROCESSING (13, 58)
MEMBRANE TRANSPORT (12, 54)
CELL ENVELOPE (3, 8)
REGULATION AND CELL SIGNALING (3, 10)
MISCELLANEOUS (2, 12)

**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	YkkCD
Protein involved in antibiotic sequestration	FabK-like
Regulator modulating expression of antibiotic resistance genes	LiaR, LiaS
Protein altering cell wall charge conferring antibiotic resistance	GdpD, PgsA

**Genome Assembly**