



Government of India
Ministry of Science & Technology
Department of Biotechnology



ONE DAY ONE GENOME

Lacticaseibacillus rhamnosus



isolated from fermented rice beverage in Manipur. The
microbe showed probiotic and antimicrobial potential

Lacticaseibacillus rhamnosus

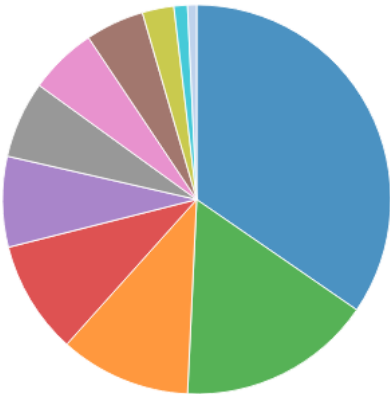
Genome Accession Number: SRR32662313

Quality of Genome Assembly and Annotation:

Results from indigenously developed **BHARAT** analysis pipeline: (**B**acterial **H**ybrid genome **A**ssembly and **R**apid **A**nnotation **T**oolset)

Table 1: Assembly Details	
Contigs	89
GC Content	46.33
Contig L50	8
Genome length	3,082,280 bp
Contig N50	126,655

Table 2: Annotated Genome Features	
CDS	3,171
tRNA	45
Repeat Regions	35
rRNA	2



Subsystem Analysis

- Subsystem (Subsystems, Genes)
- METABOLISM (92, 658)
 - PROTEIN PROCESSING (43, 222)
 - ENERGY (29, 251)
 - STRESS RESPONSE, DEFENSE, VIRULENCE (25, 113)
 - MEMBRANE TRANSPORT (20, 108)
 - RNA PROCESSING (17, 69)
 - DNA PROCESSING (15, 71)
 - CELLULAR PROCESSES (13, 95)
 - CELL ENVELOPE (7, 34)
 - MISCELLANEOUS (3, 11)
 - REGULATION AND CELL SIGNALING (2, 6)

Table 3: Antimicrobial Resistance Genes	
AMR Mechanism	Genes
Antibiotic target in susceptible species	Alr, Ddl, dxr, EF-G, EF-Tu, folA, Dfr, gyrA, gyrB, Iso-tRNA, kasA, MurA, rpoB, rpoC, S10p, S12p
Antibiotic target replacement protein	FabK
Protein altering cell wall charge conferring antibiotic resistance	GdpD, PgsA, MprF
Efflux pump conferring antibiotic resistance	MacA, MacB, MdtABC-TolC
Gene conferring resistance via absence	gidB
Regulator modulating expression of antibiotic resistance genes	LiaF, LiaR, LiaS

Genome Assembly

