

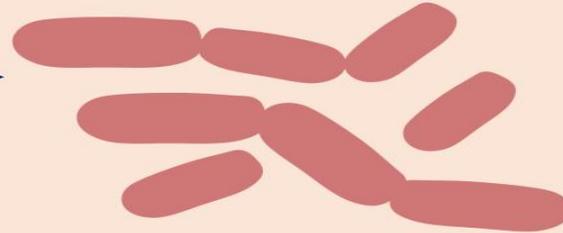


## #ONEDAYONEGENOMEINITIATIVE

### *Limosilactobacillus fermentum*



**Chhurpi cheese of Sikkim  
Himalaya**



**Isolation of *L. fermentum***

**Production of highly catalytic  
 $\beta$ -galactosidase enzyme**

### FUTURE POTENTIAL APPLICATION



**Lactose intolerance**



**Lactose  
hydrolysis**



**Lactose free  
dairy products**

# *Limosilactobacillus fermentum* (C2C)

Genome Accession Number: PRJNA1026756

## 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	208
GC Content	52.06
Contig L50	26
Genome length	1,834,986 bp
Contig N50	19,815

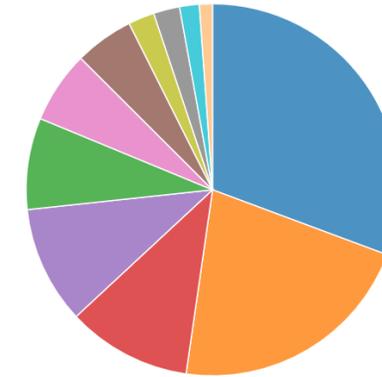
**Table 2: Annotated Genome Features**

CDS	1,946
tRNA	49
rRNA	2
Repeat Regions	57

**Table 3: Antimicrobial Resistance Genes**

AMR Mechanism	Genes
Antibiotic target modifying enzyme	RlmA(II)
Antibiotic target in susceptible species	Alr, Ddl, EF-G, EF-Tu, folA, Dfr, folP, gyrA, gyrB, inhA, fabI, Iso-tRNA, kasA, MurA, rpoB, rpoC, S10p, S12p
Gene conferring resistance via absence	gidB
Protein altering cell wall charge conferring antibiotic resistance	GdpD, MprF, PgsA

## Subsystem Analysis



Subsystem (Subsystems, Genes)

- METABOLISM (54, 331)
- PROTEIN PROCESSING (38, 196)
- DNA PROCESSING (19, 86)
- STRESS RESPONSE, DEFENSE, VIRULENCE (18, 68)
- ENERGY (14, 97)
- RNA PROCESSING (11, 41)
- CELLULAR PROCESSES (9, 56)
- CELL ENVELOPE (4, 10)
- MEMBRANE TRANSPORT (4, 12)
- REGULATION AND CELL SIGNALING (3, 8)
- MISCELLANEOUS (2, 2)

## Genome Assembly

