



DEPARTMENT OF BIOTECHNOLOGY  
Ministry of Science & Technology  
Government of India



# ONE DAY ONE GENOME

*Lactiplantibacillus plantarum*

HAS CHOLESTROL LOWERING  
ABILITY AND POTENTIAL  
PROBIOTIC FEATURES



## Quality of Genome Assembly and Annotation:

Results from indigenously developed **BHARAT** analysis pipeline: (**Bacterial Hybrid genome Assembly and Rapid Annotation Toolset**)

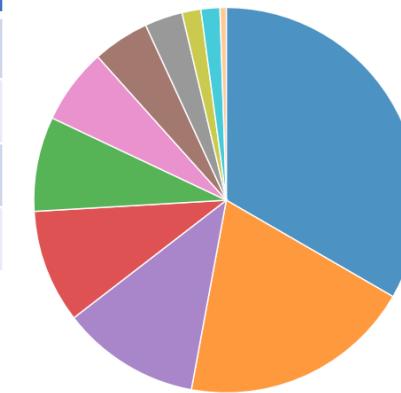
Table 1: Assembly Details

|               |              |
|---------------|--------------|
| Contigs       | 64           |
| GC Content    | 44.36        |
| Contig L50    | 4            |
| Genome length | 3,342,251 bp |
| Contig N50    | 297,907      |

Table 2: Annotated Genome Features

|                |       |
|----------------|-------|
| CDS            | 3,354 |
| tRNA           | 57    |
| Repeat Regions | 0     |
| rRNA           | 3     |

## Subsystem Analysis



## Subsystem (Subsystems, Genes)

- METABOLISM (63, 375)
- PROTEIN PROCESSING (37, 160)
- STRESS RESPONSE, DEFENSE, VIRULENCE (22, 86)
- DNA PROCESSING (18, 90)
- ENERGY (15, 129)
- RNA PROCESSING (12, 44)
- CELLULAR PROCESSES (9, 72)
- MEMBRANE TRANSPORT (6, 15)
- REGULATION AND CELL SIGNALING (3, 9)
- CELL ENVELOPE (3, 8)
- MISCELLANEOUS (1, 1)

Table 3: Antimicrobial Resistance Genes

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

## Genome Assembly

