



Government of India  
Ministry of Science & Technology  
Department of Biotechnology



# ONE DAY ONE GENOME

*Proteus mirabilis*

Isolated from Hawaijar, a fermented soybean of Manipur. The microbe  
is highly swarming and shows resistance to multiple antibiotics



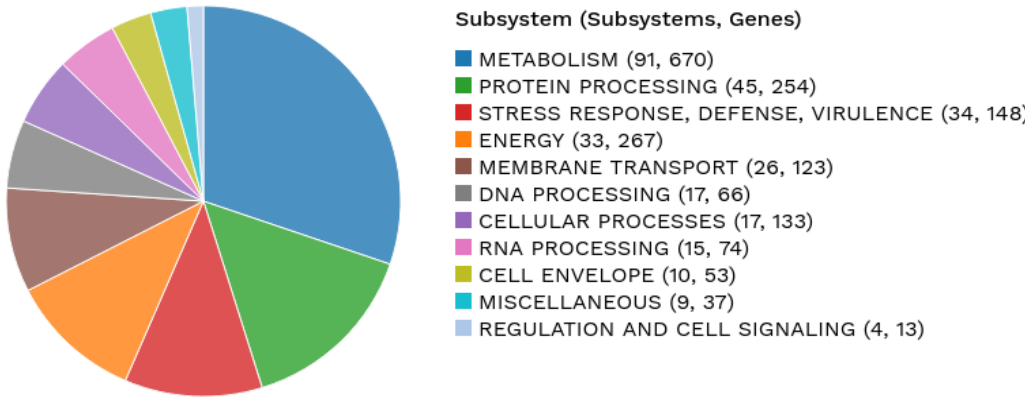
Quality of Genome Assembly and Annotation:

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                   | 219          |
| GC Content                | 38.84        |
| Contig L50                | 6            |
| Genome length             | 3,836,293 bp |
| Contig N50                | 250,902      |

| Table 2: Annotated Genome Features |       |
|------------------------------------|-------|
| CDS                                | 3,602 |
| tRNA                               | 82    |
| rRNA                               | 9     |

Subsystem Analysis



| Table 3: Antimicrobial Resistance Genes                            |                                                                                                                        |
|--------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| AMR Mechanism                                                      | Genes                                                                                                                  |
| Antibiotic activation enzyme                                       | CatA1/CatA4 family                                                                                                     |
| 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 |
| Protein altering cell wall charge conferring antibiotic resistance | GdpD, PgsA                                                                                                             |
| Efflux pump conferring antibiotic resistance                       | AcrAB-TolC, AcrZ, EmrAB-TolC, MacA, MacB, MdtABC-TolC, MdtL, MexHI-OpmD, SugE, Tet(J), TolC/OpmH                       |
| Gene conferring resistance via absence                             | gidB                                                                                                                   |
| Regulator modulating expression of antibiotic resistance genes     | AcrAB-TolC, EmrAB-TolC, H-NS, OxyR                                                                                     |

Genome Assembly

