



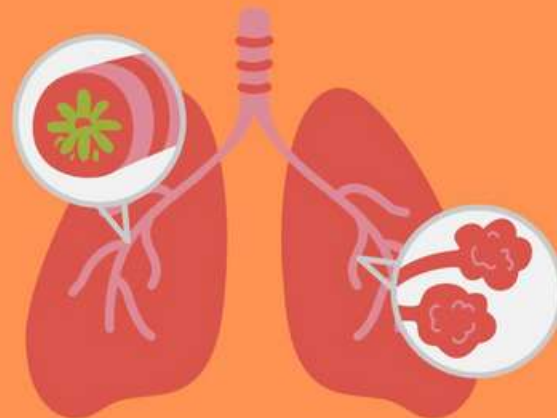
Government of India
Ministry of Science & Technology
Department of Biotechnology



ONE DAY ONE GENOME

Mycobacterium bovis

The strain was found to be resistant to pyrazinamide a hallmark trait of *M. bovis*



The discovery emphasizes the urgency of implementing a One Health approach to tackle zoonotic TB

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	183
GC Content	65.49
Contig L50	30
Genome length	4,155,294 bp
Contig N50	47,704

Table 2: Annotated Genome Features	
CDS	4,175
tRNA	44
Repeat Regions	0
rRNA	3

Subsystem Analysis

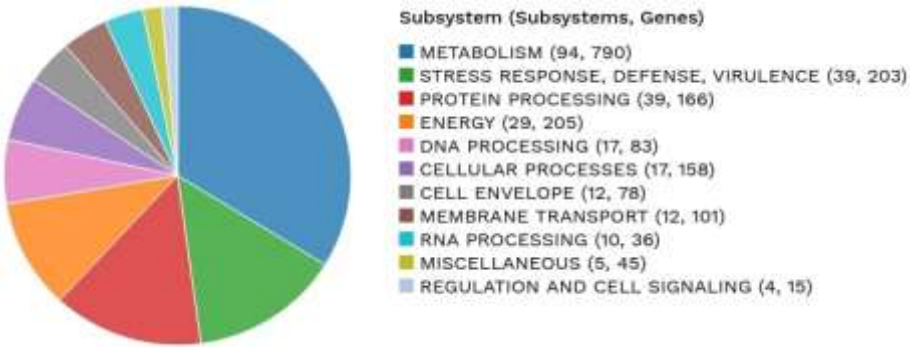


Table 3: Antimicrobial Resistance Genes	
AMR Mechanism	Genes
Antibiotic target in susceptible species	Alr, Ddl, dxr, EF-G, EF-Tu, EmbA, EmbB, EmbC, folA, Dfr, folP, gyrA, gyrB, inhA, fabI, Iso-tRNA, kasA, MurA, rho, rpoB, rpoC, S10p, S12p
Efflux pump conferring antibiotic resistance	MmpL5, MmpL7, MmpS5, Rv1258c, Rv1634, Rv1747, Rv1877, Rv2333c, Rv2994, Rv3239c
Gene conferring resistance via absence	gidB
Antibiotic inactivation enzyme	AAC(2')-I
Protein altering cell wall charge conferring antibiotic resistance	GdpD, PgsA
Regulator modulating expression of antibiotic resistance genes	ArsR family, EmbR, EthR, LpqB, MarR, MarR family, MtrA, MtrB, WhiB7

Genome Assembly

