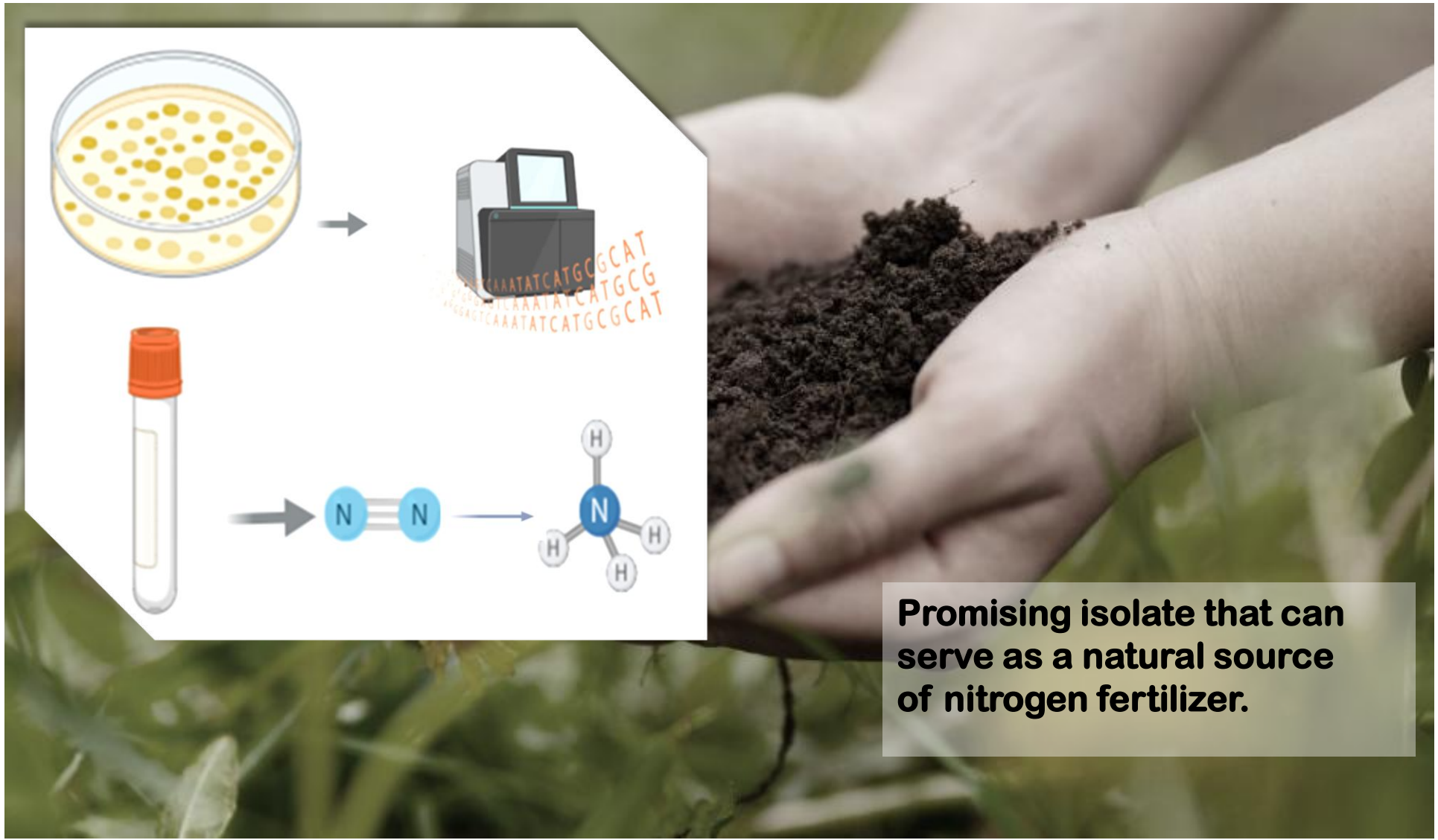
जैवप्रौद्योगिकी विभाग
DEPARTMENT OF
BIOTECHNOLOGY
सत्यमेव जयते

ONEDAYONEGENOME

BRIC
a DBT Organization

Genome of the Day: *Klebsiella sp.*



Promising isolate that can serve as a natural source of nitrogen fertilizer.

Klebsiella sp. **Genome Accession Number:** INRP000250

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	54
GC Content	55.76
Contig L50	8
Genome length	6,134,361 bp
Contig N50	240,986

Table 2: Annotated Genome Features	
CDS	6.046
tRNA	76
rRNA	4
Repeat Regions	19

Subsystem Analysis

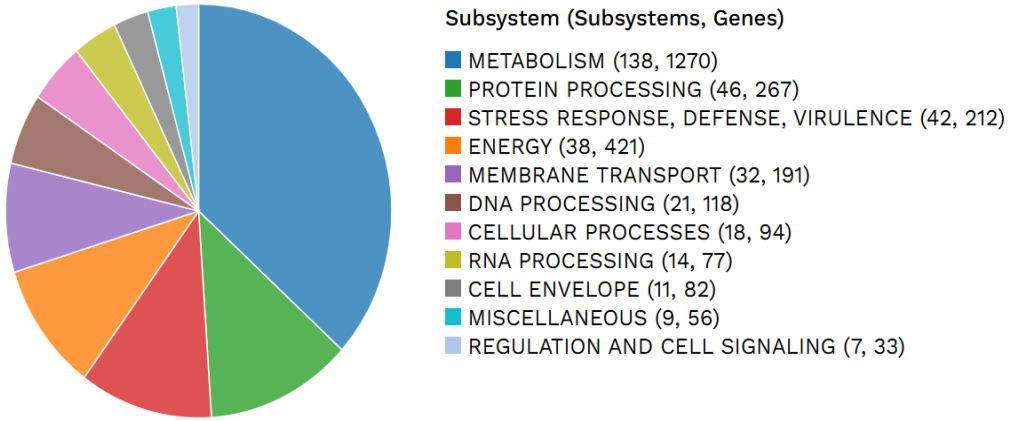


Table 3: Antimicrobial Resistance Genes	
AMR Mechanism	**Genes**
Antibiotic activation enzyme	KatG
Antibiotic resistance gene cluster, cassette, or operon	MarA, MarB, MarR
Antibiotic target in susceptible species	Alr, Ddl, dxr, EF-G, EF-Tu, folA, Dfr, folP, gyrA, gyrB, inhA, fabI, Iso-tRNA, kasA, MurA, rho, rpoB, rpoC, S10p, S12p
Antibiotic target replacement protein	BcrC
Efflux pump conferring antibiotic resistance	AcrAB-TolC, AcrAD-TolC, AcrEF-TolC , AcrZ, EmrAB-OMF, EmrAB-TolC, EmrD, MacA, MacB, MdfA/Cmr, MdtABC-TolC, MdtL, MdtM, SugE, TolC/OpmH
Gene conferring resistance via absence	gidB
Protein altering cell wall charge conferring antibiotic resistance	GdpD, PgsA

Genome Assembly