

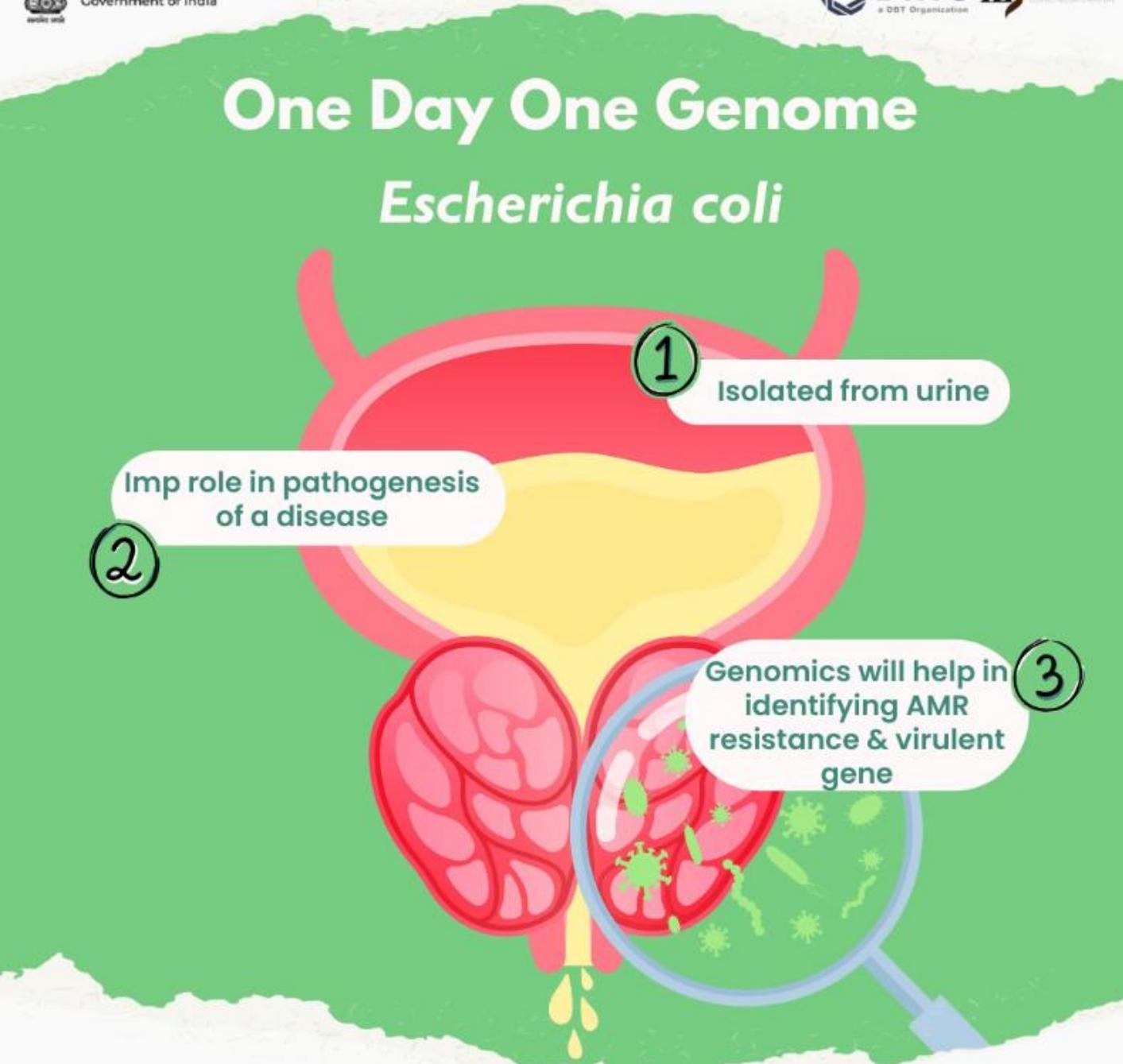


DEPARTMENT OF BIOTECHNOLOGY
Ministry of Science & Technology
Government of India



One Day One Genome

Escherichia coli



Quality of Genome Assembly and Annotation:

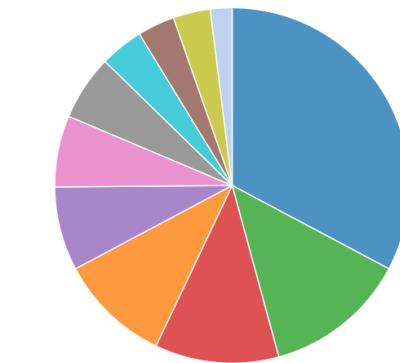
Results from indigenously developed **BHARAT** analysis pipeline: (**Bacterial Hybrid genome Assembly and Rapid Annotation Toolset**)

Table 1: Assembly Details

Contigs	107
GC Content	50.65
Contig L50	12
Genome length	4,865,192 bp
Contig N50	160,466

Table 2: Annotated Genome Features

CDS	4,817
tRNA	77
Repeat Regions	27
rRNA	3

Subsystem Analysis**Table 3: Antimicrobial Resistance Genes**

AMR Mechanism	Genes
Antibiotic target in susceptible species	Air, Ddl, dxr, EF-G, EF-Tu, folA, Dfr, folP, gyrA, gyrB, inhA, fabI, Iso-tRNA, kasA, MurA, rho, rpoB, rpoC, S10p, S12p
Efflux pump conferring antibiotic resistance	AcrAB-TolC, AcrAD-TolC, AcrEF-TolC , AcrZ, EmrAB-TolC, EmrD, EmrKY-TolC, MacA, MacB, MdfA/Cmr, MdtABC-TolC, MdtEF-TolC, MdtL, MdtM, SugE, TolC/OpmH
Antibiotic resistance gene cluster, cassette, or operon	MarA, MarB, MarR
Antibiotic inactivation enzyme	BlaEC family, CTX-M family
Regulator modulating expression of antibiotic resistance genes	AcrAB-TolC, EmrAB-TolC, GadE, H-NS, OxyR
Protein altering cell wall charge conferring antibiotic resistance	GdpD, PgsA

Genome Assembly