



Government of India
Ministry of Science & Technology
Department of Biotechnology

BRIC
a DBT Organisation
NIBMG
Central Institute of
Microbiology
National Institute of
Biomedical Genomics

ONE DAY ONE GENOME

Providencia rettgeri

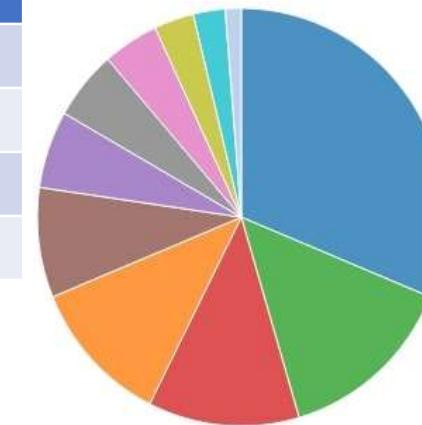


It is known for its role in persistent wound infections,
particularly in immunocompromised patients.

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	97
GC Content	40.13
Contig L50	9
Genome length	4,204,690 bp
Contig N50	127,614

Table 2: Annotated Genome Features	
CDS	3,968
tRNA	73
Repeat Regions	0
rRNA	4

**Subsystem Analysis**

Subsystem (Subsystems, Genes)
METABOLISM (99, 745)
PROTEIN PROCESSING (45, 244)
STRESS RESPONSE, DEFENSE, VIRULENCE (38, 149)
ENERGY (36, 284)
MEMBRANE TRANSPORT (27, 122)
CELLULAR PROCESSES (19, 143)
DNA PROCESSING (17, 66)
RNA PROCESSING (14, 74)
CELL ENVELOPE (10, 66)
MISCELLANEOUS (8, 33)
REGULATION AND CELL SIGNALING (4, 13)

Table 3: Antimicrobial Resistance Genes

AMR Mechanism	Genes
Antibiotic target in susceptible species	Alr, Ddl, dxr, EF-G, EF-Tu, folA, Dfr, folP, gyrA, gyrB, Iso-tRNA, kasA, MurA, rho, rpoB, rpoC, S10p, S12p
Antibiotic target replacement protein	fabV
Efflux pump conferring antibiotic resistance	AcrAB-TolC, AcrZ, EmrAB-TolC, MacA, MacB, MdtABC-TolC, MexHI-OpmD, SugE, Tet(47), TolC/OpmH
Gene conferring resistance via absence	gidB
Protein altering cell wall charge conferring antibiotic resistance	GdpD, PgsA
Regulator modulating expression of antibiotic resistance genes	AcrAB-TolC, EmrAB-TolC, H-NS, OxyR

Genome Assembly