



One Day One Genome

Morganella morganii (NIBMG_HMR_15).

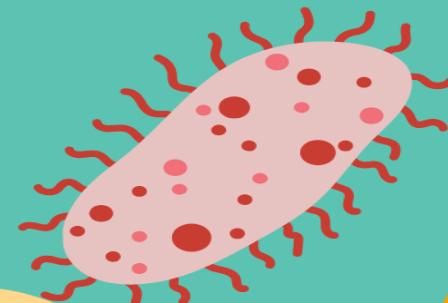
Facultative Pathogenic Bacteria of Wounds and Skin Lesions

Isolated from
Chronic Wounds

- ❖ Antibiotic Resistant
- ❖ Biofilm Producer



- ❖ Produces Toxin
- ❖ Damage Tissue



Genome Sequencing will Facilitate
Personalized Treatment Solutions

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

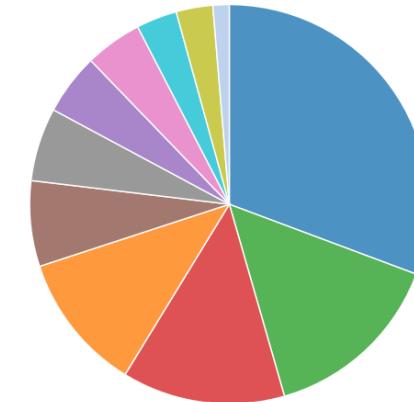
Contigs	36
GC Content	51.04
Contig L50	3
Genome length	3,831,496 bp
Contig N50	522,746

Table 2: Annotated Genome Features

CDS	3,830
tRNA	75
rRNA	4
Repeat Regions	0

Table 3: Antimicrobial Resistance Genes

AMR Mechanism	Genes
Antibiotic inactivation enzyme	CatA1/CatA4 family, CatA2 family, CatB family, DHA/MOR family, Mph(A) family, Mph(E)/Mph(G) family, OXA-1 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
Efflux pump conferring antibiotic resistance	AcrAB-TolC, EmrAB-TolC, MacA, MacB, MdtABC-TolC, QacE, Tet(A), TolC/OpmH
Protein altering cell wall charge conferring antibiotic resistance	GdpD, PgsA
Regulator modulating expression of antibiotic resistance genes	AcrAB-TolC, EmrAB-TolC, H-NS, OxyR

Subsystem Analysis

Subsystem (Subsystems, Genes)

- METABOLISM (93, 659)
- PROTEIN PROCESSING (45, 238)
- STRESS RESPONSE, DEFENSE, VIRULENCE (40, 153)
- ENERGY (34, 271)
- MEMBRANE TRANSPORT (21, 86)
- DNA PROCESSING (18, 74)
- CELLULAR PROCESSES (15, 123)
- RNA PROCESSING (14, 74)
- MISCELLANEOUS (10, 45)
- CELL ENVELOPE (9, 64)
- REGULATION AND CELL SIGNALING (4, 13)

Genome Assembly