



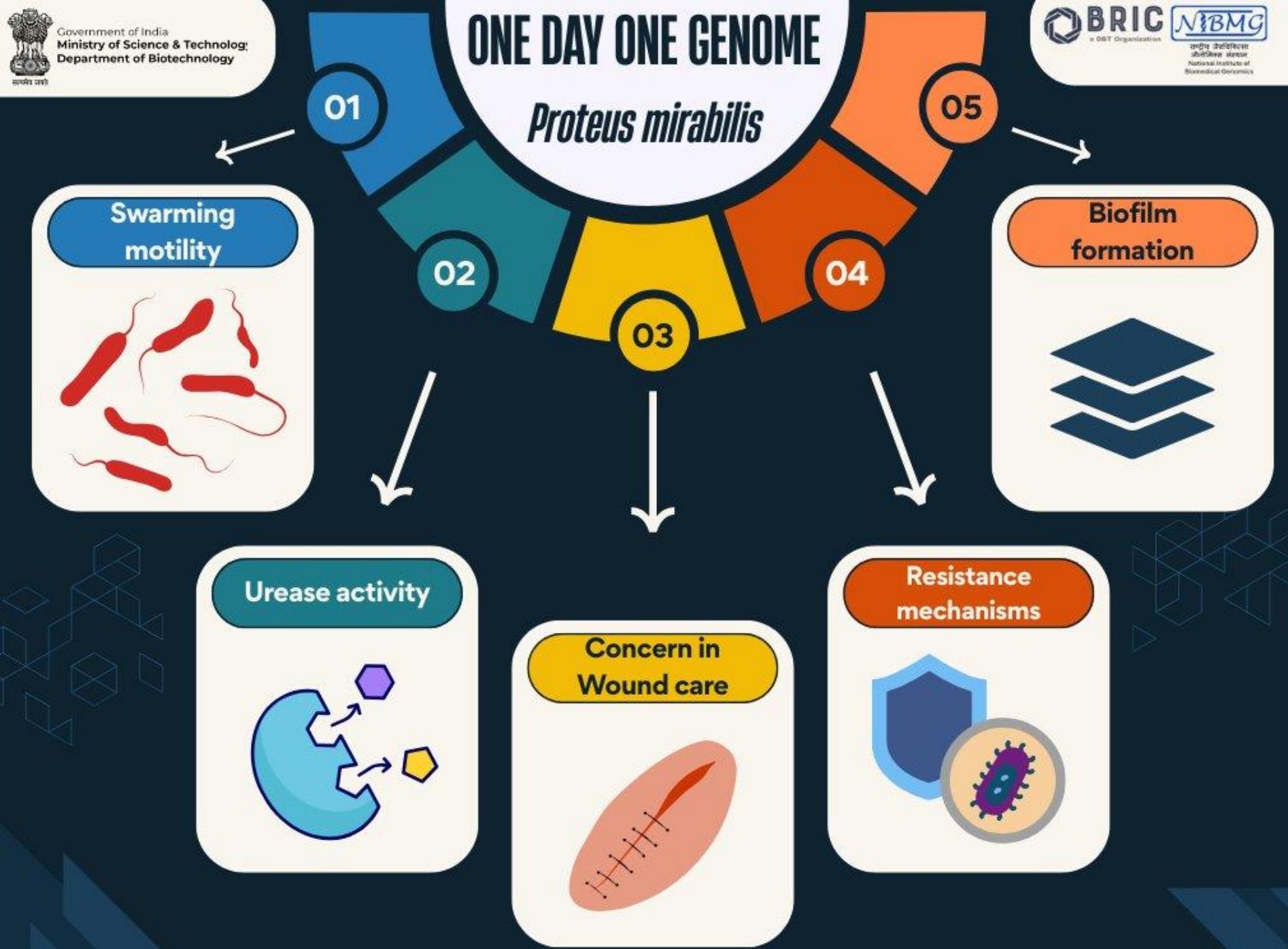
Government of India  
Ministry of Science & Technology:  
Department of Biotechnology

मानव जनरी

# ONE DAY ONE GENOME

*Proteus mirabilis*

**BRIC**  
a DBT Organization  
**NIBMG**  
नेशनल बिमेडिकल  
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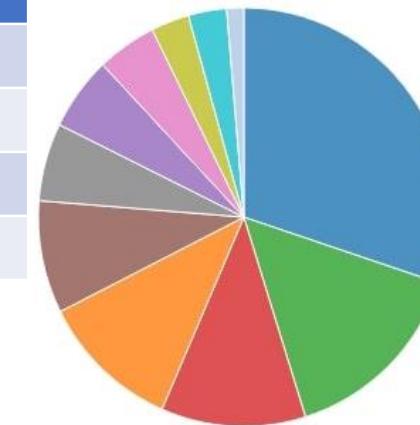


**Quality of Genome Assembly and Annotation:**Results from indigenously developed **BHARAT** analysis pipeline: (**Bacterial Hybrid genome Assembly and Rapid Annotation Toolset**)**Subsystem Analysis**

Table 1: Assembly Details	
Contigs	105
GC Content	38.49
Contig L50	10
Genome length	3,964,186 bp
Contig N50	117,096

**Table 2: Annotated Genome Features**

CDS	3,777
tRNA	77
Repeat Regions	0
rRNA	4

**Subsystem (Subsystems, Genes)**

METABOLISM	(90, 670)
PROTEIN PROCESSING	(45, 235)
STRESS RESPONSE, DEFENSE, VIRULENCE	(34, 144)
ENERGY	(33, 263)
MEMBRANE TRANSPORT	(26, 130)
DNA PROCESSING	(18, 72)
CELLULAR PROCESSES	(17, 135)
RNA PROCESSING	(14, 73)
CELL ENVELOPE	(9, 53)
MISCELLANEOUS	(9, 32)
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, inhA, fabI, Iso-tRNA, kasA, MurA, rho, rpoB, rpoC, S10p, S12p
Antibiotic inactivation enzyme	CatA1/CatA4 family
Efflux pump conferring antibiotic resistance	AcrAB-TolC, AcrZ, EmrAB-TolC, MacA, MacB, MdtABC-TolC, MdtL, MexHI-OpmD, SugE, Tet(J), 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**