



Government of India
Ministry of Science & Technology
Department of Biotechnology



ONE DAY ONE GENOME *

Plesiomonas sp.

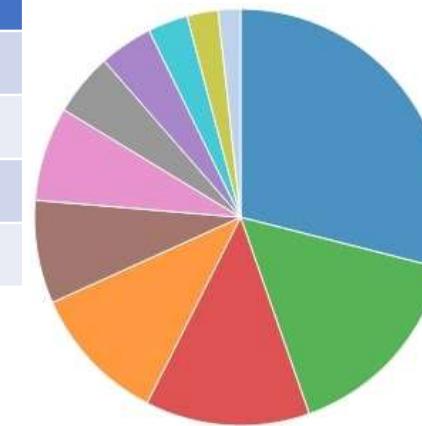
Isolated from the gut of a freshwater **pufferfish** the microbe will help in aquaculture, food safety, and the environment



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	8
GC Content	51.72
Contig L50	1
Genome length	3,787,933 bp
Contig N50	3,384,982

Table 2: Annotated Genome Features	
CDS	3,373
tRNA	121
Repeat Regions	100
rRNA	37



Subsystem (Subsystems, Genes)

METABOLISM	(83, 632)
PROTEIN PROCESSING	(45, 240)
STRESS RESPONSE, DEFENSE, VIRULENCE	(37, 153)
ENERGY	(31, 248)
MEMBRANE TRANSPORT	(23, 110)
DNA PROCESSING	(21, 103)
RNA PROCESSING	(14, 74)
CELLULAR PROCESSES	(12, 127)
MISCELLANEOUS	(9, 31)
CELL ENVELOPE	(7, 60)
REGULATION AND CELL SIGNALING	(5, 19)

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	CatB family
Efflux pump conferring antibiotic resistance	EmrAB-TolC, MacA, MacB, MdtL, Tet(35), 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	H-NS, OxyR

Genome Assembly