



Government of India
Ministry of Science & Technology
Department of Biotechnology



FOR ADVANCED
RESEARCH
AND
TECHNOLOGY
DEVELOPMENT

One Day One Genome

Bacteroides fragilis

Produces toxins, biofilms;
and complicates wound healing

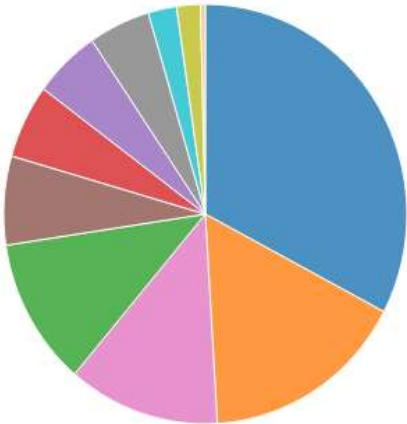


Quality of Genome Assembly and Annotation:

Results from indigenously developed **BHARAT** analysis pipeline: (**B**acterial **H**ybrid genome **A**ssembly and **R**apid **A**nnotation **T**oolset)

Table 1: Assembly Details	
Contigs	126
GC Content	40.46
Contig L50	7
Genome length	7,604,555 bp
Contig N50	308,606

Table 2: Annotated Genome Features	
CDS	7,062
tRNA	96
Repeat Regions	11
rRNA	5



Subsystem Analysis

Subsystem (Subsystems, Genes)	
METABOLISM	(86, 825)
PROTEIN PROCESSING	(43, 384)
STRESS RESPONSE, DEFENSE, VIRULENCE	(32, 137)
ENERGY	(30, 289)
DNA PROCESSING	(18, 152)
MEMBRANE TRANSPORT	(15, 187)
CELLULAR PROCESSES	(14, 185)
RNA PROCESSING	(13, 87)
CELL ENVELOPE	(6, 46)
MISCELLANEOUS	(5, 50)
REGULATION AND CELL SIGNALING	(1, 8)

Table 3: Antimicrobial Resistance Genes	
AMR Mechanism	Genes
Antibiotic inactivation enzyme	CepA family, CfxA family, NimB
Antibiotic target modifying enzyme	Erm(F)/Erm(35)
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
Protein altering cell wall charge conferring antibiotic resistance	GdpD, PgsA
Efflux pump conferring antibiotic resistance	Mef(A)
Regulator modulating expression of antibiotic resistance genes	OxyR

Genome Assembly

