



Government of India
Ministry of Science & Technology
Department of Biotechnology
मंत्रीपत्र अस्ति



ONE DAY ONE GENOME

Burkholderia contaminans

ISOLATED FROM CITRUS
PLANTS FROM ASSAM

IT CAN REDUCE DEPENDENCY ON CHEMICAL
PESTICIDES, AND PROMOTE ECO-FRIENDLY
AND SUSTAINABLE FARMING PRACTICES

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	120
GC Content	66.17
Contig L50	14
Genome length	8,870,690 bp
Contig N50	191,474

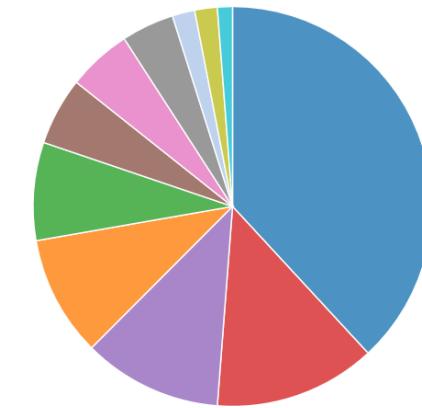
Table 2: Annotated Genome Features

CDS	8,796
tRNA	58
Repeat Regions	0
rRNA	3

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
Efflux pump conferring antibiotic resistance	EmrAB-OMF, EmrAB-TolC, MacA, MacB, MdtABC-OMF, MdtABC-TolC, MexXY-OMP
Regulator modulating expression of antibiotic resistance genes	H-NS, OxyR
Protein modulating permeability to antibiotic	OprB family, OprD family
Protein altering cell wall charge conferring antibiotic resistance	GdpD, PgsA

Subsystem Analysis



Subsystem (Subsystems, Genes)

METABOLISM	(125, 1345)
PROTEIN PROCESSING	(43, 269)
STRESS RESPONSE, DEFENSE, VIRULENCE	(37, 231)
ENERGY	(32, 366)
MEMBRANE TRANSPORT	(26, 361)
CELLULAR PROCESSES	(18, 190)
DNA PROCESSING	(17, 79)
RNA PROCESSING	(14, 73)
MISCELLANEOUS	(6, 28)
CELL ENVELOPE	(6, 51)
REGULATION AND CELL SIGNALING	(4, 29)

Genome Assembly

