



Government of India  
Ministry of Science & Technology  
Department of Biotechnology  
संसदीय अधिकारी

**BRIC**  
a DBT Organization  
**NIBMG**  
राष्ट्रीय बैमेडिकल  
बायोटेक्नोलॉजी  
नेशनल इनसिट्यूट  
ऑफ बायोमेडिकल  
गेनोमिक्स  
National Institute of  
Biomedical Genomics

One Day One Genome

## *Rothia amarae*

*Sequencing highlights the importance of understanding the functional aspects of microbe in maintaining skin health.*



**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**

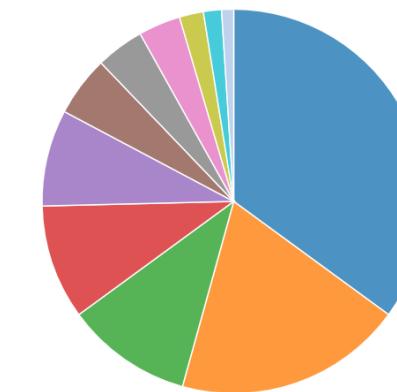
Contigs	18
GC Content	52.21 %
Contig L50	4
Genome length	2,359,585 bp
Contig N50	239,814

**Table 2: Annotated Genome Features**

CDS	2,197
tRNA	48
Repeat Regions	0
rRNA	2

**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, Iso-tRNA, kasA, MurA, rho, rpoB, rpoC, S10p, S12p
Antibiotic target replacement protein	FabL-like
Regulator modulating expression of antibiotic resistance genes	MtrA, MtrB
Protein altering cell wall charge conferring antibiotic resistance	GdpD, PgsA

**Subsystem Analysis**

Subsystem (Subsystems, Genes)

METABOLISM	(69, 417)
PROTEIN PROCESSING	(38, 190)
ENERGY	(21, 130)
STRESS RESPONSE, DEFENSE, VIRULENCE	(19, 72)
DNA PROCESSING	(16, 71)
RNA PROCESSING	(10, 33)
CELLULAR PROCESSES	(8, 20)
MEMBRANE TRANSPORT	(7, 22)
CELL ENVELOPE	(4, 9)
REGULATION AND CELL SIGNALING	(3, 9)
MISCELLANEOUS	(2, 3)

**Genome Assembly**