

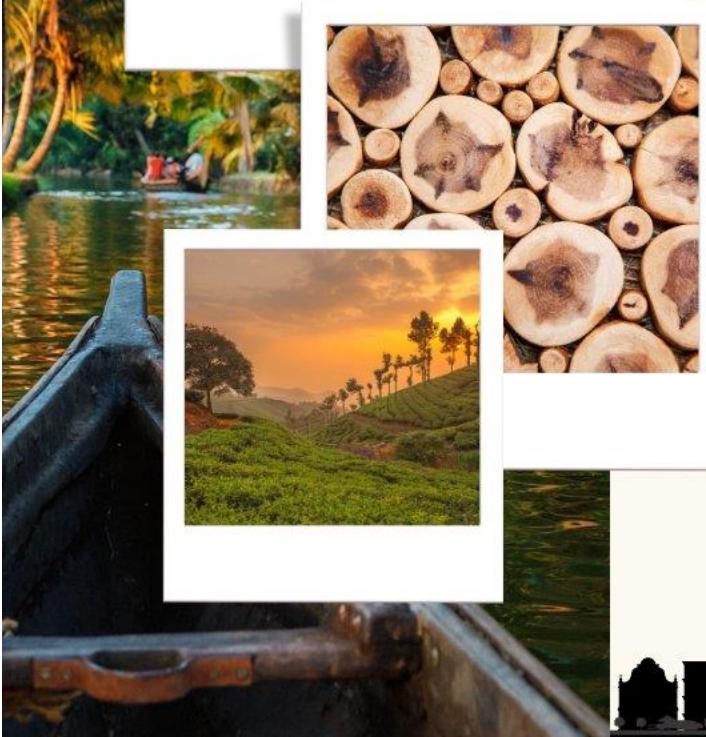


Government of India
Ministry of Science & Technology
Department of Biotechnology

मानव विजय



One Day One Genome



Santalum album aster-yellows phytoplasma

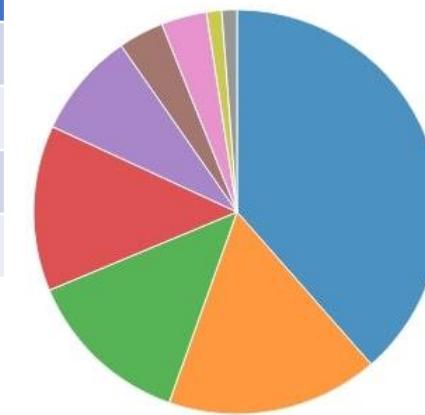
Understanding these genetic tricks paves the way for smarter diagnostics and future disease-management strategies to safeguard India's iconic fragrant tree



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	20
GC Content	28.54
Contig L50	4
Genome length	554,025 bp
Contig N50	65,478

Table 2: Annotated Genome Features	
CDS	563
tRNA	27
Repeat Regions	0
rRNA	2

**Subsystem Analysis**

Subsystem (Subsystems, Genes)
PROTEIN PROCESSING (32, 164)
METABOLISM (14, 51)
RNA PROCESSING (11, 32)
STRESS RESPONSE, DEFENSE, VIRULENCE (11, 27)
DNA PROCESSING (7, 22)
ENERGY (3, 17)
CELLULAR PROCESSES (3, 8)
MEMBRANE TRANSPORT (1, 1)
REGULATION AND CELL SIGNALING (1, 2)

Table 3: Antimicrobial Resistance Genes

AMR Mechanism	Genes
Antibiotic target in susceptible species	EF-G, EF-Tu, folA, Dfr, folP, gyrA, gyrB, Iso-tRNA, rpoB, rpoC, S10p, S12p
Gene conferring resistance via absence	gidB
Protein altering cell wall charge conferring antibiotic resistance	PgsA

Genome Assembly