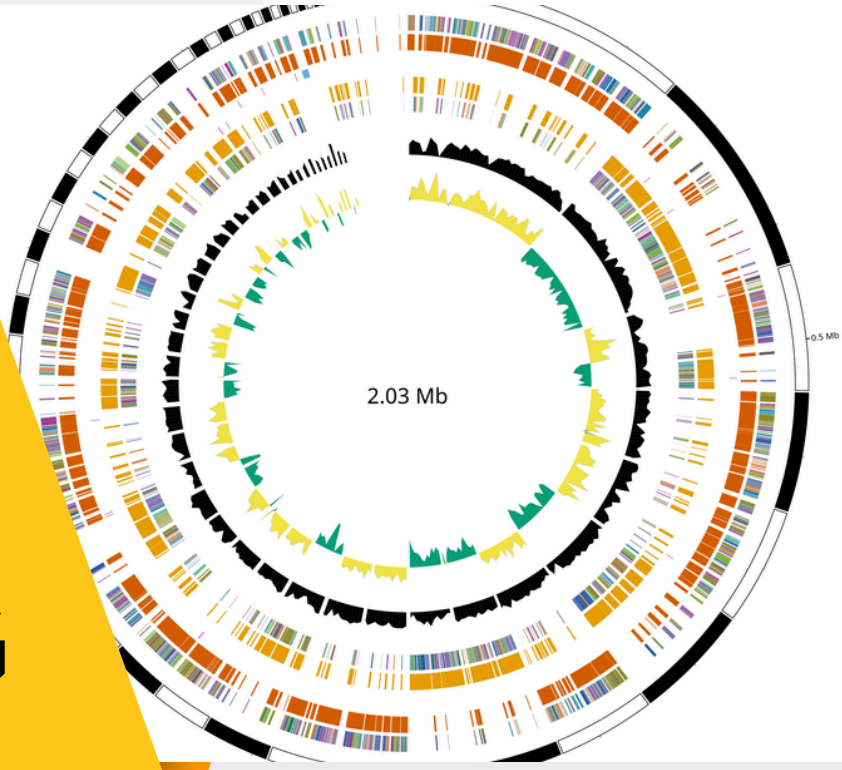
Genexplore Diagnostics & Research Centre Pvt. Ltd.

WHOLE GENOME SEQUENCING



Microbial Whole Genome Sequencing (WGS) is a comprehensive method used to determine the complete DNA sequence of an organism's genome at a single time. This technique allows researchers to study the entire genetic makeup of microorganisms, such as bacteria, viruses, and fungi, offering insights into their structure, function, evolution, and interaction with hosts.

Project workflow

DNA extraction
- From Microorganisms
- DNA quantification
- QC analysis

Library preparation and Sequencing
- Ion Xpress™ Plus Fragment Library Kit
- Sequencing platform: Ion GeneStudio S5 Plus

Bioinformatic analysis
- Data Quality & Pre-Processing
- Genome Assembly (SPAdes)
- Genome Annotation (RAST & Bakta)
- Gene function Annotation(COG, GO & KEGG)
- Finding of AMR Genes & Virluence factor
- Plasmid

Sequencing parameters

Ion GeneStudio S5 Plus System

Read Length 200 bp

Library type Single end

50X TO 100X depth

Key information
- Sample type: Microbial culture (pure)
- Method: NGS based
- TAT: 30 days

info@genexplore.co.in

+917926584044

1201-1210, 12th floor, Iconic Shyamal, Shyamal cross road, Satellite, Ahmedabad-3800015