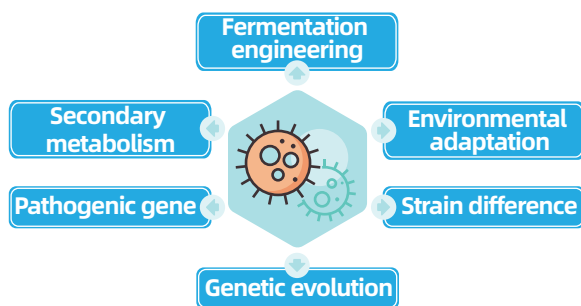


# Bacterial Genome Sequencing

Tailored to meet various research goals, BMKGene offers genome sequencing and assembly services for bacteria, including whole genome, draft genome, and complete genome. By combining next-generation sequencing with third-generation sequencing data, to achieve high-quality genome assembly and accurate functional annotation. For complete bacterial genome assembly, BMKGene guarantees 0 gap, providing researchers with a comprehensive understanding of their target bacteria.

## Application



## Bacterial Genome Solutions

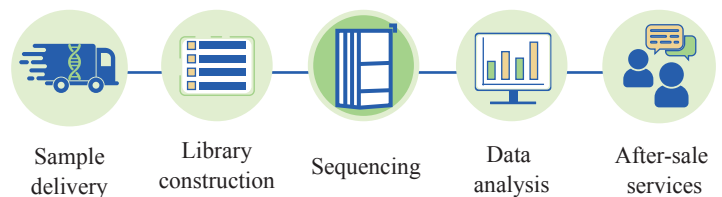
### Option 1 Genome re-sequencing:

- Bacterial whole genome sequencing (WGS): SNP calling.

### Option 2 Genome assembly:

- Bacterial Draft Genome (NGS): Genome component analysis and function annotation.
- Bacterial Complete Genome (TGS+NGS): Genome component analysis, function annotation, and circos of genome.

## Service Workflow



## Service Advantages

- Multiple sequencing strategies are available for different bacterial genome research goals.
- The species identification and classification of bacteria are conducted to study their evolutionary relationships and more.
- Bacteria complete genome sequencing by PacBio or ONT platform with **0 Gap** assembly guaranteed.
- Highly experienced in bacterial genome assembly with over 10,000 microbial genomes assembled.
- Professional after-sale technical support team fulfilling more specific research needs.

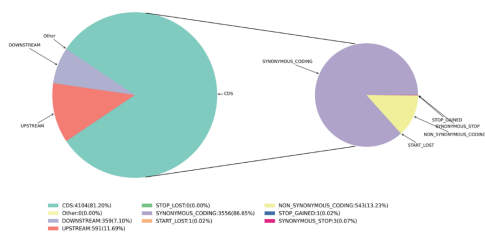
## Service Specifications

Library	Read Length	Recommended Strategy	Assembly
Illumina	PE150	100X NGS	Draft map
PacBio	HiFi-15 Kb	30X HiFi	Complete map 0-Gap
Nanopore	10-20 Kb	100X ONT + 100X NGS	Complete map 0-Gap

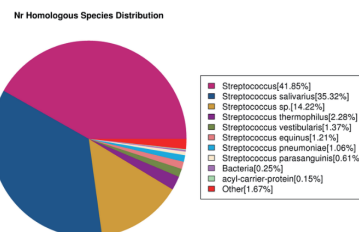
## Sample Requirements

Platform	Qubit Conc. (ng/μL)	Amount (μg)	Volume (μL)	Purity
Illumina	1	0.06	20	OD260/280: 1.7-2.2; OD260/230: ≥ 1.0; Nanodrop/Qubit: 0.8-2.5
PacBio	20	1.2	20	
Nanopore	40	2	20	

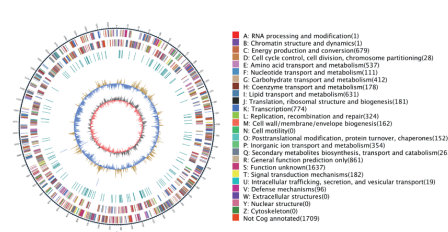
## Demo Results



1. SNP classification and annotation



2. Coding gene annotation



3. Genome visualization

## Featured Publications

Year	Journal	Article	Applications	DOI
2023	Science Advances	Ampicillin-controlled glucose metabolism manipulates the transition from tolerance to resistance in bacteria	Bacterial resistance	10.1126/sciadv.ade8582
2023	International Journal of Molecular Sciences	Discovery of Bacteroides uniformis F18-22 as a Safe and Novel Probiotic Bacterium for the Treatment of Ulcerative Colitis from the Healthy Human Colon	Disease treatment	10.3390/ijms241914669
2022	Science of The Total Environment	Integrative chemical and omics analysis of the ammonia nitrogen removal characteristics and mechanism of a novel oligotrophic heterotrophic nitrification-aerobic denitrification bacterium	Pollution treatment	10.1016/j.scitotenv.2022.158519



### Biomarker Technologies (BMK) GmbH

BioZ, Johann-Krane Weg tech@bmklcloud.com  
 42, 48149 Münster, Germany www.bmkgene.com

Copyright©2009-2023 Biomarker Technologies (BMK) GmbH .  
 All Rights Reserved. Information and specifications are subject  
 to change at any time without notice.