

GOTBio Laboratory and Analysis Services

- Analytical Chemistry

- HPLC, LC-MS/MS, and GC-MS analysis
- Quantitative analysis of small molecules
- Metabolite profiling
- Stability and degradation studies

- Biosafety and Compliance Testing

- Mycoplasma testing
- Endotoxin testing (LAL assay)
- Sterility testing
- Regulatory compliance and documentation support

- Cell Culture and Assay Development

- Cell line development and maintenance
- Primary cell culture
- 3D cell culture and organoid development
- Cell-based assays (e.g., cytotoxicity, proliferation, apoptosis)

- Confocal Microscopy

- High-resolution imaging of cells and tissues
- Fluorescence and live-cell imaging
- 3D reconstruction and analysis of biological samples

- Environmental and Stability Testing

- Accelerated stability testing

- Environmental monitoring (e.g., temperature, humidity)
- Microbial contamination testing
- Product stability studies under various conditions

- Genotyping and Sequencing

- Sanger sequencing
- Next-generation sequencing (NGS)
- Single-cell RNA sequencing (scRNA-seq)
- SNP genotyping
- Microarray analysis

- High-Throughput Screening (HTS)

- Compound library screening
- Drug discovery assays
- Phenotypic screening
- Target-based screening

- Histology and Pathology

- Tissue processing and sectioning
- Hematoxylin and eosin (H&E) staining
- Special staining techniques
- Pathological analysis and reporting

- Immunoassays

- ELISA and multiplex assays
- Flow cytometry
- Immunohistochemistry (IHC) and immunofluorescence (IF)

- Antibody production and characterization

- **In Vivo Studies**

- Animal model development and maintenance

- Pharmacokinetics and pharmacodynamics (PK/PD) studies

- Toxicology and safety assessment

- Efficacy studies in disease models

- **Microbiology and Virology Services**

- Microbial culture and identification

- Viral vector production and titration

- Antimicrobial susceptibility testing

- Bacteriophage isolation and characterization

- **Molecular Biology Services**

- DNA/RNA extraction and purification

- PCR, qPCR, and RT-PCR

- Cloning and plasmid construction

- Gene editing (e.g., CRISPR/Cas9)

- **Preclinical Animal Models of Disease**

- Development and use of animal models for various diseases (e.g., cancer, neurodegenerative disorders, cardiovascular diseases)

- In vivo testing of therapeutics and interventions

- Behavioral and physiological assessments in disease models

- Longitudinal studies to evaluate disease progression and treatment efficacy

- Proteomics

- Protein identification and quantification
- Mass spectrometry-based proteomics
- Post-translational modification analysis
- Protein interaction studies

- Protein Expression and Purification

- Recombinant protein expression (bacterial, yeast, insect, and mammalian systems)
- Protein purification (e.g., affinity, size-exclusion, ion-exchange chromatography)
- Protein characterization (e.g., SDS-PAGE, Western blot, mass spectrometry)

- Transcriptomics (Spatial, scRNAseq, scATAC)

- Spatially resolved gene expression analysis
- Integration of transcriptomics with tissue architecture
- High-resolution mapping of gene activity in tissues
- Single cell analysis
- Chromosome accessibility