

# We Are Laboratory Technologies

Empowering Innovators through Research and Development





We provide research services with well-equipped laboratory to fulfill the requirements of the innovators, We provide project assistance to the students and innovators of the Biotechnology, Microbiology, Nanotechnology, Pharmacology, Analytical Chemistry, Food Technology, Biochemistry, Agriculture Paste Management, Pharmacy, Botany, Zoology.

# Fields of Expertise

- Animal Tissue Culture
- In-vitro Biomedical Assays
- Phytochemical Analysis
- Analytical Services
- Nanotechnology Assays
- Molecular Biology Assays
- Cell Biology Assays
- Microbiology Assays

#### **ANIMAL TISSUE CULTURE**

## Anticancer/ Cytotoxicity Assays

- By MTT Method
- By SRB Method
- By Neutral Red Uptake Method
- By Tryphan Blue Dye Exclusion Method
- By XTT Method
- By Brine Shrimp Lethality Method

#### **Apoptosis Determination**

- By DAPI Nuclear Staining Method
- By Flow Cytometry Method
- By AO/EB Stainig Method

#### Cell Cycle Analysis

- By flow cytometry Method
- By Caspase Activation Method
- Mitochondrial Transmembarane Potential Detection Method
- Phosphatidylserine Externalization
  Method
- In-vitro Wound Healing/ Scratch Assay using Different Cells

## IN-VITRO BIOMEDICAL ASSAYS

#### In-Vitro Antioxidant Assays

- By DPPH Method
- By FRAC Method
- By ABTS+ Radical Scavenging Method
- By Nitric Oxide Scavenging Method
- By Superoxide Scavenging Method

## In-Vitro Enzymatic Antioxidant Assays

- By SOD Method
- By CATALASE Method
- By GSH Method
- By LPO Method
- By Total Protein Method

## In-Vitro Anti-inflammatory Assays

- By Protein Denaturation Assay
- By Heat Induced Hemolysis Method
- By Bovine Albumin Fraction Method
- By HRBC Membrane Stabilization Method
- By Proteinase Inhibition Method

### In-Vitro Antidiabetic Assays

- By Alpha Amylase Inhibition Method
- By Glucose Uptake Method
- By Anti-glycation Method
- By Glucosidase Inhibition Method

#### In-Vitro Microbial Assays

- Antibacterial/Antifungal activity by agar well plate method
- Antibacterial/ Antifungal activity by Disc Diffusion Method
- Minimum Inhibitory Concentration (MIC)
  Determination
- Minimum Bactericidal Concentration (MBC)/Minimum Fungicidal Concentration (MFC) Determination
- Antibiofilm Activity by 96 Well Plate Method

#### **Anti-Malerial Assays**

- By Beta Hematin inhibition by Uv-Spectroscopy Method
- By Beta Hematin Inhibition by FTIR Method

## Anti-HIV Assay

- By Putative Method
- By Pepsin Inhibition Method

## **Anti-obesity Assays**

- By Lipase Inhibition Method
- By Cholesterol Inhibition Method

## Anti-TB Assay

By Almar Blue Method

## Anti-Ulcer Assay

- By H+/K+ ATPase Inhibition Method
- By Urease Inhibition Method
- By Na+/K+ Neutralization Method
- By Microbial Method
- By Cell line Method

## Anti-Helmintic Assay

 Anti-helmintic activity by using different types of Parasites

## **Analytical Services**

- UV-Vis Spectroscopy
- FTIR (Fourier Transform Infra-Red Spectroscopy)
- Particle Size (Nano size)
- Particle Size (Micron size)
- Zeta Potential
- HPLC
  - O Purity Analysis per dose
  - O Assay of tablet or capsule
  - Method development and validation for dissolution assay
- Dissolution study
- Disintegration study
- Flame Photometry (Na<sup>+</sup> / K<sup>+</sup>)
- Karl Fischer titration
- Mechanical stirrer (Per hr)
- Viscosity
- Polarimetry
- Refractometer
- Photoflurometery
- XRF (X-ray fluorescence Spectrometry)
- XPS (X-ray photoelectron Spectroscopy)
- CHNS (Elemental Analysis)
- ICP OES (Elemental Analysis Heavy Metals)
- AAS (Atomic Absorption Spectroscopy)
- GC (Purity by general method)
- GC (Purity with standard)
- GC Head Space Solvent
- BET Surface Area
- GCMS (Gas chromatography–mass spectrometry)
- DSC (Differential Scanning Calorimetry)
- Flash chromatography
- NMR (Nuclear Magnetic Resonance) (Solvent: Methanol, CDCl3, DMSO, D2O)
- MS (Mass Spectrometry)
- AFM (Atomic Force Microscopy)
- TEM (Transmission Electron Microscopy)
- GPC (Gel Permeation Chromatography)
- LCMS (Liquid chromatography–mass spectrometry)

- SEM EDX / FE SEM EDX (Elemental Analysis)
- FE SEM (For Nano Size)
- XRD (X Ray Diffraction) Powder
- SEM (For Micron Size)
- HPTLC
- Water analysis
- Lyophilizer
- High speed homogenizer

# **Phytochemical Analysis**

Extraction of Plant Powder

- By Soxhlet Method
- By Maceration Method
- By Sonication Method

Extraction of Essential oils by Hydrodistillation

Phytochemical Tests (Qualitative and Quantitative) Isolation of Phyto-constituents Characterization of Phyto-constituents

# Microbiology

Isolation of Microorganisms Identifications of Microorganisms

- 16s rRNA
- 18s Rrna

# Molecular Biology

Isolation of DNA Polymer Chain Reaction (PCR) Molecular Docking

# Nanotechnology

Synthesis of Nanoparticles / Nanodots / **Nanofibers** 

- By Biosynthesis Method
- By Chemical Synthesis Method
- By Green Synthesis

Characterization of Nanoparticles Formulation of Nanogels Invitro Drug Release

# **Research Trainings**

- Hands on Research Training in Animal Tissue Culture
- Hands on Research Training in **Biomedical Science**
- Hands on Research Training In Molecular Biology
- Hands on Research Training in Advanced Microscopies
- Hands on Research Training on ELISA **Techniques**

## **Learn By Passionate Experts**



Mr. Masidd Khalate Founder and Director



Dr. Mohmed Karobari **Advisory Member** 



Dr Shaeesta **Bhavikatti** Advisory Member



Dr. Padma Dandge Advisory Member



Ms. Chandani **Jamdade** Advisory Member



Dr. Sanjay Harke Advisory Member



Mr. Nilesh Wadkar Advisory Member



Dr. Avinash Raut Advisory Member



Dr. S. Johnson Samuel Advisory Member



Mr. Alfredi Moyo Advisory Member



Dr. A. U. Sutar Advisory Member



Mr. Yasin Mulani Head, Department of Manufacturing

## Innovate with Us





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