



## VINAYAKA MISSION'S MEDICAL COLLEGE & HOSPITALS, KARAikal.

A constituent college of Vinayaka Mission's Research Foundation, (Deemed to be University), Salem – 636308

### CONSULTANCY BROCHURE

## VINAYAKA MISSION'S MEDICAL COLLEGE & HOSPITALS, KARAikal



### College Contact Details

**Contact number – 04368 263340**

**E-Mail ID – dean@vmmckkl.edu.in**

### Consultancy Co-Ordinator Contact Details

**Contact number – 9500628647**

**E-Mail ID – drnamrata@vmmckkl.edu.in , rc.vmmc@vmu.edu.in**

### Targeted Audience:

<input type="checkbox"/> Faculty of Medicine	}	<input type="checkbox"/> Under Graduate
<input type="checkbox"/> Faculty of Homoeopathy		<input type="checkbox"/> Post Graduate
<input type="checkbox"/> Faculty of Dentistry		<input type="checkbox"/> Ph.D Scholar
<input type="checkbox"/> Faculty of Pharmacy		
<input type="checkbox"/> Faculty of Physiotherapy		
<input type="checkbox"/> Faculty of Nursing		
<input type="checkbox"/> Faculty of Allied Health Sciences		
<input type="checkbox"/> Faculty of Engineering		
<input type="checkbox"/> Faculty of Science		

### Consultancy:

S. No.	Category	Consultancy Provided
1	Genomic and Molecular Research	<ul style="list-style-type: none"><li>Gene expression profiling for cancer and metabolic diseases</li><li>Detection of single nucleotide polymorphisms (SNPs) and mutations for early disease screening</li><li>Support for projects involving transcriptomics and genomic alterations</li><li>Assistance with primer design, nucleic acid quantification, and PCR amplification</li></ul> <p>→ <i>Ideal for: PG/PhD scholars, faculty, cancer researchers</i></p>
2	Infectious Disease Diagnostics	<ul style="list-style-type: none"><li>Rapid molecular identification of pathogens (Bacterial, Viral, Fungal)</li><li>Analysis of antimicrobial resistance genes</li><li>Pathogen-specific RNA/DNA detection in clinical and environmental samples</li><li>Support in studies targeting ESKAPE pathogens and nosocomial infections</li></ul> <p>→ <i>Ideal for: Microbiology projects, hospital collaborations, epidemiological research</i></p>
3	Biomarker Discovery and Validation	<ul style="list-style-type: none"><li>Salivary and serum biomarker identification for diseases like oral cancer and metabolic syndrome</li><li>Immunological marker quantification (e.g., cytokines, inflammatory markers)</li><li>Biomarker-based stratification of patient groups for research studies</li></ul> <p>→ <i>Ideal for: Translational research, diagnostics development, thesis support</i></p>
4	Cancer Research and Diagnostics	<ul style="list-style-type: none"><li>Molecular profiling of cancer tissues (oral, breast, colon)</li><li>Investigation of BRCA gene mutations and NF-κB pathways</li><li>Support for projects involving tumor suppressor gene analysis and staging</li></ul> <p>→ <i>Ideal for: Pathology, oncology departments, PhD/postdoc level studies</i></p>
5	Protein and Immunological Studies	<ul style="list-style-type: none"><li>Quantitative analysis of proteins using immunoassays</li><li>Detection of antibodies and antigens for infectious and autoimmune conditions</li><li>ELISA support for vaccine, serology, and antigen load projects</li></ul> <p>→ <i>Ideal for: Clinical research, pharma collaborations, immunodiagnostics</i></p>
6	Tissue and Cell Imaging	<ul style="list-style-type: none"><li>High-resolution fluorescence imaging for cellular localization studies</li><li>Cytological assessments and histopathological evaluations using staining and microscopy</li></ul>

		<ul style="list-style-type: none"> <li>• Frozen tissue sectioning for diagnostic or molecular pathology research</li> <li>→ <i>Ideal for: Medical PGs, pathology, anatomy, biotech collaborations</i></li> </ul>
7	<b>Microbiome and Biofilm Research</b>	<ul style="list-style-type: none"> <li>• Profiling of oral, gut, and vaginal microbiota</li> <li>• Investigation of microbial dysbiosis in cancer, diabetes, and metabolic impact</li> <li>• Biofilm inhibition assays using novel materials and surfactants</li> <li>→ <i>Ideal for: Microbiome projects, public health, pharma-based infection control studies</i></li> </ul>
8	<b>Nanomedicine and Antimicrobial Coatings</b>	<ul style="list-style-type: none"> <li>• Evaluation of novel nano-compounds on microbial inhibition</li> <li>• Testing of surface coatings for hospital-grade antimicrobial resistance</li> <li>• Collaboration on nanomedicine-based delivery systems (e.g., liposome-encapsulated drugs)</li> <li>→ <i>Ideal for: Materials science researchers, pharma R&amp;D, hospital infrastructure testing</i></li> </ul>
9	<b>Metabolic Disorder Assessment</b>	<ul style="list-style-type: none"> <li>• Complete biochemical profiling: blood glucose, urea, creatinine, uric acid, lipid profile, liver enzymes, etc.</li> <li>• Metabolite-based analysis in lifestyle diseases (obesity, diabetes, cardiovascular)</li> <li>• Longitudinal data analysis for metabolic intervention studies</li> <li>→ <i>Ideal for: Endocrinology, internal medicine, lifestyle disease research</i></li> </ul>
10	<b>Sample Handling and Biobanking</b>	<ul style="list-style-type: none"> <li>• Processing of blood, tissue, and saliva samples for molecular and immunological analysis</li> <li>• Storage of sensitive biological materials under controlled temperatures (-20°C to -80°C)</li> <li>• Long-term archiving for longitudinal studies and multi-phase projects</li> <li>→ <i>Ideal for: Multi-year funded projects, collaborative research studies</i></li> </ul>
12	<b>Research Design &amp; Technical Consultation</b>	<ul style="list-style-type: none"> <li>• Assistance with study design, ethical documentation, and research methodology</li> <li>• Proposal writing and formatting for external grant applications (ICMR, DBT, DST, etc.)</li> <li>• Data analytics support (basic stats, interpretation, charts)</li> <li>→ <i>Ideal for: Faculty, early-career researchers, seed money applicants</i></li> </ul>

## CRL Contact Details

**Dr. Suganya Jayakumar,**

Incharge - CRL, Vinayaka Mission's Medical College & Hospitals, Karaikal.

**Contact number** –8220355446

**E-Mail ID** -drsganya30391@vmmckkl.edu.in

**Consultancy services already utilized by**

1. EGS Pillai engineering college
2. Perundhalaiya Kamarajar college
3. Bharathidasan University
4. NIT – Karaikal

## CRL Profoma for Investigation

Name of the Department	
Name of the Principal Investigator	
Name of the Co-investigator	
Title of the project	
Study Period	
Ethical Clearance Certificate Reference number	
CRL Equipment utilization details	
Number of investigations required in CRL	
Number of blood samples for each investigation	
Any special investigation required	
Consumables Details	
Budget of the project	

Investigator

Head of the Department

Head of the Institution

Committee	Signature	Remarks (If any)
Head - CRL		
Dean (VMMCH)		

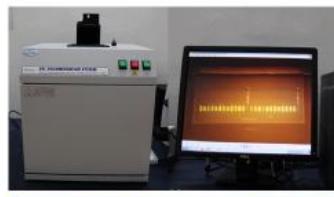




Quant studio-5 RTPCR system by Applied Biosystems



Fluorescence Microscope



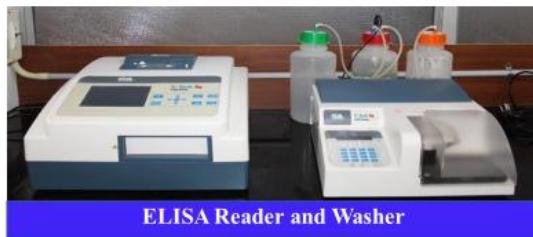
Gel Documentation System by Biotech



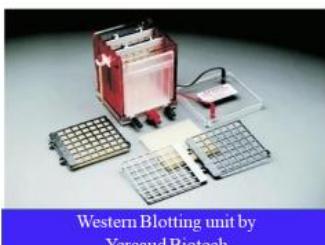
Veriti-96 well thermal cycler



Nanodrop Spectrophotometer



ELISA Reader and Washer



Western Blotting unit by Yercaud Biotech



Cooling centrifuge by iGene Bioserve



-20°C Deep Freezer by Bluestar



Spectrophotometer by Hitachi



Fully Automated analyzer by BioMérieux



-80°C DEEP FREEZER

## Introduction

Microbiology department at Vinayaka Mission's Medical College & Hospital (VMMC&H) serves as a hub for advanced diagnostic and research services, offering expertise in the detection, quantification, and characterization of viral pathogens. Equipped with cutting-edge instruments like RT-PCR analyzers, biosafety cabinets, and genomic tools, the laboratory ensures accurate and reliable results for clinical diagnosis, outbreak investigations, and public health studies. Our consultancy services support healthcare professionals and researchers through advanced molecular and serological techniques, fostering timely and precise reporting to guide treatment and interventions. Committed to excellence, the laboratory contributes to medical education, research, and improved healthcare delivery in Puducherry, Tamil Nadu and beyond.

S. No.	Laboratory	Consultancy Provided
1.	Virology	<ul style="list-style-type: none"><li>RT-PCR, Viral Load Quantification, Virus Isolation, Genomic Sequencing, Viral Culture, Viral RNA/DNA Extraction</li><li>Immuno chromatographic techniques (for AIDS, Hepatitis B, Hepatitis C and dengue for diagnostic and research purpose).</li></ul>
2.	Mycology	<ul style="list-style-type: none"><li>Blood, CSF, Blood fluids, biopsy material from FNAC, endometrial biopsy, endocervical and vaginal swab for genital infection and antibiogram for all bacterial isolates are analyzed. Mycology Serology / Immunology</li><li>Parasite isolation and culture.</li></ul>
2.	Bacteriology	<ul style="list-style-type: none"><li>Bacteriology section which includes urine checking, sputum and throat swab for respiratory tract infection.</li><li>Blood, CSF, Blood fluids, biopsy material from FNAC, endometrial biopsy, endocervical and vaginal swab for genital infection and antibiogram for all bacterial isolates are analyzed.</li><li>For widal, RPR test, ASO, CRP, RA factor test, enteric fever, syphilis, streptococcal sequelae and various autoimmune disorders.</li></ul>

## Microbiology Contact Details

Dr. HAJA ABDUL NAZEER

Professor & Head, Department of Microbiology, Vinayaka Mission's Medical College & Hospitals, Karaikal.

**Contact number -9944026789**

**E-Mail ID** - hodmicrobiology@vmmckl.com

## Introduction

### Histopathology Laboratory Consultancy at Vinayaka Mission's Medical College & Hospital, Karaikal

The Histopathology Laboratory at Vinayaka Mission's Medical College & Hospital (VMMC&H) provides advanced diagnostic and consultancy services, specializing in the microscopic evaluation of tissues for disease diagnosis. Equipped with state-of-the-art instruments like automated tissue processors, microtomes, and staining systems, the laboratory offers routine histological analysis, special stains, immunohistochemistry, and frozen section diagnostics. Staffed by skilled pathologists, the laboratory ensures accurate and detailed reporting, aiding in the diagnosis of cancer, inflammatory disorders, and infections. Committed to quality and precision, the laboratory supports clinicians, researchers, and medical education while contributing to improved patient care and scientific advancements.

- Routine Histopathological Examination
- Special Staining Techniques
- Immunohistochemistry (IHC)
- Frozen Section Analysis
- Cytopathology
- Histochemical Analysis
- Molecular Pathology
- Tumor Grading and Staging
- Infectious Disease Diagnosis
- Biopsy Examination
- Liver Biopsy Analysis
- Kidney Biopsy Analysis
- Neuropathological Examination
- Postmortem Histopathology
- Endometrial Biopsy Analysis
- Cervical Biopsy Analysis
- Lymph Node Pathology

## Pathology Contact Details

### Dr. Anusha

Professor & Head, Department of Pathology, Vinayaka Mission's Medical College & Hospital, Karaikal.

**Contact number** – 8098610530

**E-Mail ID** – [hodpathology@vmmckl.edu.in](mailto:hodpathology@vmmckl.edu.in)

# BIOMEDICAL INSTRUMENTATION TRAINING

## Targeted Audience:

- Faculty of Engineering
- Faculty of Medicine
- Faculty of Homoeopathy
- Faculty of Dentistry
- Faculty of Pharmacy
- Faculty of Physiotherapy
- Faculty of Nursing
- Faculty of Allied Health Sciences

- Under Graduate
- Post Graduate
- Ph.D Scholar

## Consultancy

S. No.	Department	Instrument Training Provided
2.	Radiology	MRI-Magnetic Resonance Imaging, CT-Computed Tomography, MRI & CT Printer, X-Ray, X-Ray Printer, Mobile X-Ray Ultrasound
3.	OT complex	ENT-Operating Microscopy, Ophthal Operating Microscopy, Laparoscopy Unit, C-ARM, OT Table, OT Light, Anesthesia Workstation, Surgical Diathermy, Patient Monitor
4.	ICU Equipments	HFNC, Defibrillator, Neonatal Ventilator, Mobile Ultrasound, O <sub>2</sub> -Blender, Ventilator, Patient Monitor, Oxygen Concentrator, Mobile Suction Machine, Baby Incubator, Baby Phototherapy, Baby Warmer, Infusion Pump, Syringe Pump, Dialysis Machine
5.	Hospital Laboratory	Cryostat Machine, Fully Automated Analyzer, Automated Hematology Analyzer, ABG Machine, Microbiology Analyzer, Elisa Washer, Elisa Reader, Photometer, Microscope, Incubator, Centrifuge, Biosafety Cabinet, Easylyte Analyzer
6.	Cardiology OP	Echo Machine, Treadmill
7.	Ophthalmology OP	Slit Lamp, Optical Coherence Tomography, Refraction Unit
8.	Skin OP	Intense Pulsed Light Laser, Yag Laser, Electrocautery
9.	CSSD & CGSD	Horizontal Autoclave, Vertical Autoclave, ETO Sterilization, Oxygen Generator Plant, Liquid Oxygen Tank, Oxygen Emergency Backup, Medical Vacuum System
10.	Central Research Laboratory	Semi-Auto Analyser, Gel Electrophoresis, Spectrophotometer, Thermal Cycler, ELIZA Reader, Fluorescence Microscope, Centrifuge, Colorimeter, Incubator, Laminar Air Flow Chamber.

## Biomedical Contact Details

**Mr. Parthiban,**

Biomedical Engineer, Vinayaka Mission's Medical College & Hospitals, Karaikal.

**Contact number – 9944333058**

**E-Mail ID – [biomedical33358@gmail.com](mailto:biomedical33358@gmail.com)**



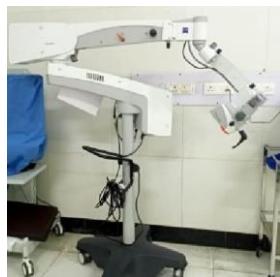
MRI-Magnetic Resonance Imaging



CT-Computed Tomography



X-Ray



ENT-Operating Microscopy



Ophthal Operating Microscopy



Laparoscopy Unit



Anesthesia Workstation



Defibrillator



Neonatal Ventilator



Baby Phototherapy



Dialysis Machine



Cryostat Machine



Fully Automated Analyzer



ELISA Reader



Biosafety Cabinet



Echo Machine



Fundus Fluorescein  
Angiography



Autorefractometer



Optical Coherence  
Tomography



Yag Laser



Electrocautery



Oxygen Generator  
Plant



Fluorescence  
Microscope



Thermal Cycler



UV Spectrophotometer



Semi-Auto Analyser