VINAYAKA MISSION'S RESEARCH FOUNDATION
Deemed to be University under section 3 of the UGC Act 1956

VINAYAKA MISSION'S MEDICAL COLLEGE, KARAIKAL
A Constituent College of Vinayaka Mission's Research Foundation - Deemed to be University, Salem

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

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Consultancy Co-Ordinator Contact Details

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RESEARCH CONSULTANCY

Central Research Laboratory for Biomedical Research

Targeted Audience:

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

- Under Graduate
- Post Graduate
- Ph.D Scholar

Consultancy:

S. No.	Category	Consultancy Provided
1	**Genomic and Molecular Research**	• Gene expression profiling for cancer and metabolic diseases • Detection of single nucleotide polymorphisms (SNPs) and mutations for early disease screening • Support for projects involving transcriptomics and genomic alterations • Assistance with primer design, nucleic acid quantification, and PCR amplification *→ Ideal for: PG/PhD scholars, faculty, cancer researchers*
2	**Infectious Disease Diagnostics**	• Rapid molecular identification of pathogens (Bacterial, Viral, Fungal) • Analysis of antimicrobial resistance genes • Pathogen-specific RNA/DNA detection in clinical and environmental samples • Support in studies targeting ESKAPE pathogens and nosocomial infections *→ Ideal for: Microbiology projects, hospital collaborations, epidemiological research*
3	**Biomarker Discovery and Validation**	• Salivary and serum biomarker identification for diseases like oral cancer and metabolic syndrome • Immunological marker quantification (e.g., cytokines, inflammatory markers) • Biomarker-based stratification of patient groups for research studies *→ Ideal for: Translational research, diagnostics development, thesis support*
4	**Cancer Research and Diagnostics**	• Molecular profiling of cancer tissues (oral, breast, colon) • Investigation of BRCA gene mutations and NF-κB pathways • Support for projects involving tumor suppressor gene analysis and staging *→ Ideal for: Pathology, oncology departments, PhD/postdoc level studies*
5	**Protein and Immunological Studies**	• Quantitative analysis of proteins using immunoassays • Detection of antibodies and antigens for infectious and autoimmune conditions • ELISA support for vaccine, serology, and antigen load projects → *Ideal for: Clinical research, pharma collaborations, immunodiagnostics*
6	**Tissue and Cell Imaging**	• High-resolution fluorescence imaging for cellular localization studies • Cytological assessments and histopathological evaluations using staining and microscopy

		• Frozen tissue sectioning for diagnostic or molecular pathology research *→ Ideal for: Medical PGs, pathology, anatomy, biotech collaborations*
7	**Microbiome and Biofilm Research**	• Profiling of oral, gut, and vaginal microbiodata • Investigation of microbial dysbiosis in cancer, diabetes, and metabolic impact • Biofilm inhibition assays using novel materials and surfactants *→ Ideal for: Microbiome projects, public health, pharma-based infection control studies*
8	**Nanomedicine and Antimicrobial Coatings**	• Evaluation of novel nano-compounds on microbial inhibition • Testing of surface coatings for hospital-grade antimicrobial resistance • Collaboration on nanomedicine-based delivery systems (e.g., liposome-encapsulated drugs) *→ Ideal for: Materials science researchers, pharma R&D, hospital infrastructure testing*
9	**Metabolic Disorder Assessment**	• Complete biochemical profiling: blood glucose, urea, creatinine, uric acid, lipid profile, liver enzymes, etc. • Metabolite-based analysis in lifestyle diseases (obesity, diabetes, cardiovascular) • Longitudinal data analysis for metabolic intervention studies *→ Ideal for: Endocrinology, internal medicine, lifestyle disease research*
10	**Sample Handling and Biobanking**	• Processing of blood, tissue, and saliva samples for molecular and immunological analysis • Storage of sensitive biological materials under controlled temperatures (-20°C to -80°C) • Long-term archiving for longitudinal studies and multi-phase projects *→ Ideal for: Multi-year funded projects, collaborative research studies*
12	**Research Design & Technical Consultation**	• Assistance with study design, ethical documentation, and research methodology • Proposal writing and formatting for external grant applications (ICMR, DBT, DST, etc.) • Data analytics support (basic stats, interpretation, charts) *→ Ideal for: Faculty, early-career researchers, seed money applicants*

CRL Contact Details

Dr. Suganya Jayakumar,
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Consultancy services already utilized by

1. **EGS Pillai engineering college**
2. **Perundhalaivar 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)		

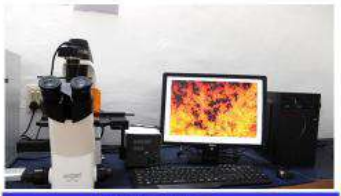

CENTRAL RESEARCH LABORATORY
FOR BIOMEDICAL RESEARCH
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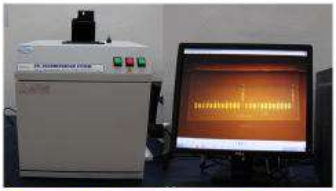

READER
ELISA WASHER



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



MICROBIOLOGY

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	• RT-PCR, Viral Load Quantification, Virus Isolation, Genomic Sequencing, Viral Culture, Viral RNA/DNA Extraction • Immuno chromatographic techniques (for AIDS, Hepatitis B, Hepatitis C and dengue for diagnostic and research purpose).
2.	Mycology	• Blood, CSF, Blood fluids, biopsy material from FNAC, endometrial biopsy, endocervical and vaginal swab for genital infection and antibiogam for all bacterial isolates are analyzed. Mycology Serology / Immunology • Parasite isolation and culture.
2.	Bacteriology	• Bacteriology section which includes urine checking, sputum and throat swab for respiratory tract infection. • Blood, CSF, Blood fluids, biopsy material from FNAC, endometrial biopsy, endocervical and vaginal swab for genital infection and antibiogam for all bacterial isolates are analyzed. • For widal, RPR test, ASO, CRP, RA factor test, enteric fever, syphilis, streptococcal sequlae and various autoimmune disorders.

Microbiology Contact Details

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PATHOLOGY

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

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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, Opthal Opertating 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_2-Blender, Ventilator, Patient Monitor, Oxygen Concentrator, MobileSuction 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

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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