

Research Labs @ JMMC & RI

| No | Laboratory | Area | Type of research activity (experimental/observational/ Interventional/translational/ Interdisciplinary) | Methodology Technology | Comments |
|----|--|-----------|--|---|---|
| 1 | Bacteriology Lab, Room 504- 506, 4 th floor, A Block, Academic Building | 500 sq ft | Experimental observational | Specimen culture, Isolation and antibiotic sensitivity testing, special staining | Infrastructure for basic and advanced research in Bacteriology, Virology, Mycology Myco-bacteriology and Serology |
| 2 | Serology Lab Room 530, 4 th floor, B Block Academic Building | 550 Sq ft | Observational Interdisciplinary | Antigen- antibody detection | |
| 3 | Automated Lab, Room 517-519, 4 th floor, A block, Academic Building | 550 Sq ft | Observational Experimental | Automated culture facility for body fluids. Identification of sensitivity, detection of resistance mechanisms | |
| 4 | TB Lab Room 540, 4 th floor B Block Academic Building | 200 Sq ft | Experimental Observational | TB culture, staining, PCR based techniques | |
| 5 | Physiology Research Lab Room 458 C Block, 3 rd floor, Academic Building | 400 sq ft | Experimental Observational Interdisciplinary | Body fat analysis, Cognitive studies, Sleep studies, Memory studies | Capable of doing research in Metabolic diseases, Sleep studies, Effects on memory |
| 6 | LFT Lab Room 1224 II nd floor St Thomas Block | 150 sq ft | Observational | Lung function studies | Research in lung function status of workers exposed to occupational hazards |
| 7 | Bronchoscopy Lab, Room 1823, 8 th floor St Thomas Block | 200 sq ft | Observational, Interventional | Lung histology and function studies | Studies in lung cancer |
| 8 | Biochemistry Lab, Room 4386 Old block | 500 sq ft | Experimental Interdisciplinary | Chemiluminiscence Clinical Chemistry Nephelometry Electrophoresis Luminometry | Capability to develop and evaluate in-house diagnostic kits |

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| | | | | HPLC | |
| 9 | Hematology Lab Room 4386 Old block | 200 Sq ft | Experimental Interdisciplinary | Coagulation analysis | Capable of doing research in blood parameters and evaluating diagnostic kits |
| 10 | NAT Lab II nd floor Blood bank building | 500 sq ft | Observational Experimental | Nucleic acid amplification and Chemiluminiscence | Cappable of doing research in HIV, HBV and HCV |
| 11 | Immunohematology Lab Room 4454 1 st floor Blood bank building | 400 sq ft | Experimental Interdisciplinary | Red cell serology | Phenotyping and extended phenotyping |
| 12 | Hyperbaric Oxygen Therapy Lab Room 2217 II nd floor Hridayalaya | 200 sq ft | Interventional | Delivery of oxygen at 1.8 to 2.4 ATA Trans cutaneous oxygen measurement | Post radiation injury, Trauma and Burn. Alcohol withdrawal symptoms |
| 13 | JISHAM Room 2206 II nd floor Hridayalaya | 500 sq ft | Observational | Body fluid volume, Electrolytes, BMI | Post operative body fluid shift condition or burns |
| 14 | JITER Room 303 3 rd floor,A block, Academic Building | 200 sq ft | Experimental | Placenta separating instruments | Tissue engineering research |
| 15 | Microscopy and staining Lab, Room 1221 2 nd floor, St Thomas Block | 100 sq ft | Observational | Gram staining | STD research |
| 16 | Phototherapy lab, Room 1223, 2 nd floor, St Thomas Block | 50 sq ft | Interventional | UV A and UV B therapy | Vitiligo research |

Research Labs @ JCMR- Central Research Facility



Cell and molecular Biology Facility (Dr. Alex George)

The lab keenly focusses on the molecular level mechanisms involved in different diseases. We are currently working on congenital anomalies (Orofacial Cleft) as well as cancers (lung and breast cancers) focusing on molecular biology of cancer initiation, extracellular vesicles and liquid biopsy.



Biochemistry Research lab (Dr. Mathew John)

The focus of research in this laboratory lies in the proteomic profiling and the analysis of free radical biology of chronic inflammatory diseases. Additionally, the lab trying to understand the molecular mechanism of chronic inflammatory diseases by combining proteomics and bioinformatics. Neuroimmunology diagnostic services are also provided.



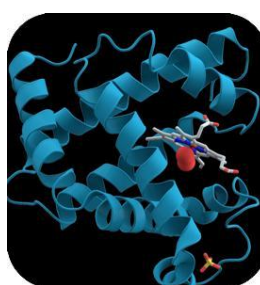
Phytochemistry Research Division (Dr. Mathew John)

The Phytochemistry Research Laboratory focuses on screening bioactive compounds with medicinal properties. The lab's main goal is to isolate and identify novel plant compounds with pharmaceutical importance. Currently focusing on *Carica papaya*.



Cytogenetics and Genomics Lab (Dr. Suresh Kumar)

The laboratory focuses on reproductive biology as well as haematological malignancies. We focus on identifying gene variants involved in disorders of sexual development. Understanding the genetics and epigenetic background of Polycystic Ovary Syndrome is another area of interest. Studies on obesity & breast cancer and male infertility are also conducted.



Computational and Structural Biology Lab (Dr. DileepVijayan)

The lab focusing on the solving of complex biological problems through in silico, in vitro, in vivo, and structural biology analysis. The lab is also focusing on the computer aided drug design. Various projects focus on Alzheimer's disease, uterine fibroids and ayurgenomics are also executed in the lab.



Small Animal Research Facility

The research facility is designed to conduct experiments on laboratory animals for research and education purpose. The facility is registered with CCSEA.