



King George's Medical University

Department of Health Research-Multidisciplinary Research Unit (DHR -MRU)

Vision: To develop state of art facility promoting translational and multidisciplinary research with access to all students, faculty and research scholars of the University and affiliates.

Research Facilities

1. Genomics
2. Proteomics
3. Cell Culture
4. 3D Printing and Surgical Planning

Nodal Officer

Prof Divya Mehrotra	1st Jan 2018 to 16th September 2022
Prof Raghuwar Dayal Singh	17th September 2022 – Till Date

RESEARCH STAFF AT DHR MRU

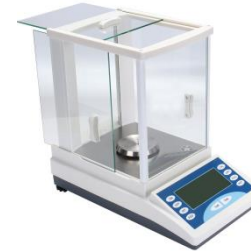
Name	Designation
Dr Sumit Kumar	Research Scientist II
Dr Rahul Pandey	Research Scientist I
Ms Jaya Singhal	Laboratory Technician
Ms Ekta Anthony	Laboratory Technician
Mr Lokendra Singh	Lab Assistant/ Data Entry Operator

RESEARCH ADVISORY COMMITTEE

Name	Designation
Prof Ravi Shankar HOD Molecular and Structural Biology Division Professor (AcSIR) & Chief Scientist CSIR CDRI Lucknow	Chairperson
Prof Nuzhat Hussain Professor, Department of Pathology, RMLIMS, Lucknow	Co-Chairperson
Prof Amit Goel Additional Professor, Department of Gastroenterology, SGPGIMS, Lucknow	Clinical Expert (External)
Prof Raghuwar D Singh Department of Prosthodontics, KGMU	Nodal Officer/Member Secretary
Prof Hardeep Malhotra Professor, Dep of Neurology, KGMU, Lucknow	Clinical Expert (Internal)
Prof D Himanshu Medical Superintendent, GH & AH, KGMU, Lucknow	Clinical Expert (Internal)
Dr Vikasendra Agarwal State Surveillance Officer, IDSP, UP Department of Medical & Health Services, GOUP	Nominee of State Health Department
Dr V P Singh Scientist E, Department of Health Research Ministry of Health Family Welfare, Govt of India, New Delhi	Nominee from ICMR Institute/ICMR Headquarter

General Facility

1. Biosafety Cabinet: BSL-II
2. Ice flaker machine
3. Water baths
4. Dry bath
5. Vortex Mixers
6. Rocker shaker
7. Weighing balance
8. pH meter
9. Magnetic stirrers
10. Hot air oven
11. Incubator chamber
12. Roller mixer
13. 4° C refrigerator
14. -20° C refrigerators
15. -80° C freezers
16. Tissue disruptor: Fast prep-24
17. Autoclaves
18. Milli-Q Water System



Genomics Facility

1. Real time PCR : Model Biorad CFX96
2. Thermocyclers (PCR): Model Veriti
3. Speed-vac sample dryer: Savant
4. Refrigerated table-top centrifuge: Sorvell
5. Refrigerated bench-top centrifuge: Thermo [1.5ml;15ml, 35ml, 50ml, 96 well plate rotors]
6. BioRad horizontal electrophoresis unit
7. Gel documentation system
8. Nanodrop spectrophotometer



Research Work

Gene expression studies on:

Oral cancer and Pre-cancer
Thyroid cancer
Cervical cancer



Proteomics Facility

1. BioRad vertical electrophoresis unit
2. Gel documentation system
3. Gel scanner
4. ELISA reader
5. Multimode plate reader/spectrophotometer
6. Automated multi-well plate washer
7. Water bath Sonicator
8. Rotatory mixer



Research Work

ELISA based assays on blood, soft tissue, cell culture and saliva samples



Cell Culture Facility

1. Biosafety Cabinet
2. CO₂ incubator
3. Centrifuge
4. Inverted Microscope with a CCD camera: Bright field and DIC imaging
5. Countess II: Colorimetric, Fluorescence based Digital Cell counter
6. Liquid Nitrogen Storage facility
7. UV-crosslinker
8. Water bath



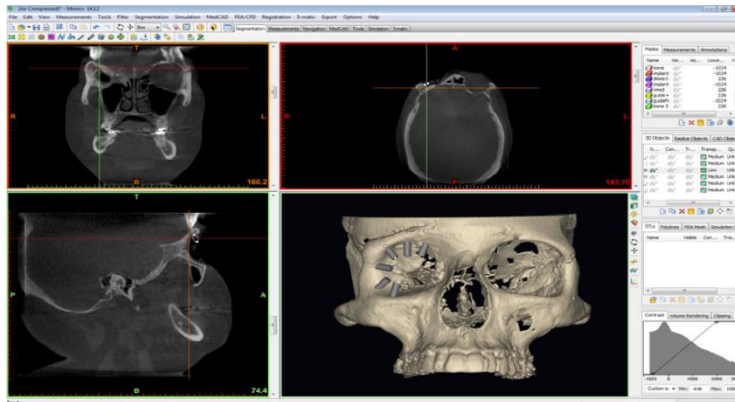
Research Work

- Secondary cell line culture
- Regenerative potential assessment of growth factors like PRF, PRP and BMP
- Medicinal potential assessment of plant extracts
- Heavy metal toxicity and stress evaluation



3D Printing and Surgical Planning Facility

1. 3D Printer: Form lab 2
2. Bioprinter Trivima
3. Haptic Device with free form software
4. Mimics Innovation Suit for Surgical Planning
5. 3D Camera
6. Computer systems for image analysis and surgical planning
7. UV-curing device
8. Dryer cabin



Research Work

- Craniofacial Reconstruction
- Distraction Osteogenesis
- Customized Implants Planning and Fabrication
- Surgical Guides for Orthognathic Planning
- Maxillofacial Prosthesis
- Breast Prosthesis in collaboration with Dept. of Endocrine Surgery & Prosthodontics
- Finger, eye and ear prosthesis in collaboration with Dept. of Prosthodontics

