

Department of Health Research- Multidisciplinary Research Unit, KGMU



Genomics Facility

Equipment Available

- Real time PCR : Model Biorad CFX96
- Thermocyclers (PCR): Model Veriti
- Speed-vac sample dryer: Savant
- Refrigerated table-top centrifuge: Sorvell
- Refrigerated bench-top centrifuge: Thermo [1.5ml;15ml, 35ml, 50ml, 96 well plate rotors]
- BioRad horizontal electrophoresis unit
- Gel documentation system
- Nano drop spectrophotometer

Research Work

- ✓ Gene expression studies on
- ✓ Oral cancer and Pre-cancer,
- ✓ Thyroid cancer
- ✓ Breast cancer
- ✓ Cervical cancer
- ✓ Neurological disorders



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Proteomics Facility

Equipment Available

- BioRad vertical electrophoresis unit
- Gel documentation system
- Gel scanner
- ELISA reader
- Multimode plate reader/spectrophotometer
- Automated multi-well plate washer
- Tissue disruptor: Fast-prep 24
- Water bath sonicator
- Rotatory mixer

Research Work

ELISA based assays on blood, soft tissue, cell culture and saliva samples for various diseases.



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Cell Culture Facility

Equipment Available

- Biosafety Cabinet
- CO₂ incubator
- Centrifuge
- Inverted Microscope with a CCD camera
- Countess II: Fluorescence based Digital Cell counter
- Liquid Nitrogen Storage facility
- UV-Crosslinker Water Bath

Research Work

- ✓ Dental-pulp derived stem cell culture
- ✓ Periodontal Derived cell culture
- ✓ Mammalian cell line culture
- ✓ Adipose tissue derived stem cells
- ✓ Regenerative potential assessment of growth factors like PRF, PRP and BMP
- ✓ Study on mRNA binding proteins



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3-D Printing & Surgical Planning Facility

Equipment Available

- 3D Printer: Form lab 2 (DHR HRD GRANT)
- Haptic Device with free form software
- Mimics Innovation Suit for Surgical Planning
- Computer systems for image analysis & surgical planning
- UV-curing device
- FDM Printer
- Dryer cabin

Research Work

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

