

JUBILEE CENTRE FOR MEDICAL RESEARCH

One month internship program in June 2024.

Focus at Laboratory for Computational and Structural Biology (LCSB).

Academic highlights

The following topics will be introduced.

1. Isolation of genomic DNA: genomic DNA isolation and quantification from blood and fibroid tissues.
2. Cell based cytotoxicity experiments: Cell revival, trypsinization, cell seeding, MTT assay.
In vitro anti-oxidant assays: DPPH or ABTS based assay.
3. Screening Inhibitors against disease causing proteins: Various biochemical like ThT, ANS, CR for protein aggregation, colorimetric and fluorescence-based enzyme inhibition assays for AD related proteins such as AChE and MAO.
4. Introduction to protein crystallography: Protein production/purification, protein preparation for crystallization, different crystallization methods, practical session on protein crystallization,
5. Introduction to computer aided molecular design and molecular modeling: Protein structure prediction, active site determination, molecular docking, high throughput virtual screening workflow, ligand and structure-based drug design, in silico ADMET, mechanistic elucidation of disease-causing mutation, molecular dynamics.
6. Visit/interactions with other labs at JCMR

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