



## Centre of Excellence in Computational Genomics

*Certification by Dextrose*

### Group-I: Computational Biology

1. Analysis of mitochondrial metagenomics data to obtain insights into MELAS
2. Tool development to calculate Solvent accessible surface area from MD simulation trajectory.

### Group-II: Bio Software Development

1. User interface to plot protein-ligand interactions from virtual screening results.

### Group-III: Metabolic Engineering

1. Genetic modelling of *Oryza sativa* to understand and optimize Water use efficiency
2. An in-silico study on regulating host immune response against SARS-CoV-2

### Group-IV: Molecular modelling and simulation

1. Understand the underlying role of abscisic acid in plant growth and regulation, an in-silico study
2. 3D-QSAR analysis of plant derivatives with Brefeldin A and cAMP for effective interaction with Epac2.

### Group-V: Augmented Reality

1. Development of a pymol plugin for visualization protein-protein interaction.
2. Augmented reality approach for drug discovery

### Group-VI: Medicinal plants

1. In-silico study on lemon grass as a potential drug target against SARS-CoV-2.

### Group-VII: Bio-database

1. Rice expression atlas: A database for BPT201 and TN4 varieties of *Oryza sativa*
2. Development of a HTML based tool for bulk download of ligand structures

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