

Elective Recombinant DNA Technology with Immunology & Bioinformatics Module

(Course duration: 60days)

COURSEWORK

Introductory Bioinformatics & overview of Biological Research with Bioinformatics

**Molecular Biology concepts, Biological databases & Database Searching
Bioinformatics & Functional Proteomics**

Bioinformatics & Structural Proteomics

Bioinformatics & Expression proteomics

Pairwise and Multiple Sequence analysis (BLAST, FASTA and CLUSTAL W)

Motif and Domain Assignments

Phylogenetic Analysis in Bioinformatics

Mass spectrometry in Proteomics, Homology Modeling

Introduction to Recombinant DNA Technology

Isolation of DNA from soft tissue

Basics of DNA Extraction procedures

Isolation of DNA from plant tissue (C-TAB)

Purification of DNA, Extraction of Genomic DNA from Prokaryotes

Isolation of Plasmid DNA

Agarose gel electrophoresis (Theory & Practical)

Basic concepts of Antigen-Antibody interactions

Blood Grouping and Rh typing

HIV Tridot test & Widal test

Immuno diffusion principles

ODD test & RID test

Internal Assignment (2)

Industrial Project (1)