

Short Term Training in Genetic Engineering / Gene Cloning

Genetic Engineering is the process of inserting the new genetic information into existing cells in order to modify specific organism.

Application of this Program: Research & Development, Agriculture , Animal Genetics , Clinical Genetics, Drug Discovery, Microbial Technology, Enzymes , Industrial biotechnology.

Module I - Basics of Laboratory: Lab safety and Procedures, Record Maintenance, Handling of Equipments , Sterilization Techniques , Preparation of Chemical & Reagents

Module II - Bioinformatics: Primer Designing, Vectors, Selection of Restriction Sites, Virtual PCR, Bioinformatics tools & Techniques

Module II: Nucleic Acid Extraction : Extraction of DNA , Extraction of RNA , Purification of mRNA through Oligo-dT Column Chromatography, cDNA Construction , Quantitative and Qualitative Analysis

Module III - PCR Technology: PCR & Applications, Optimization of PCR, Troubleshooting in PCR applications, Nested PCR, Colony PCR

Module IV – Recombinant DNA Technology: Isolation of plasmid DNA, transformation, restriction enzyme digestion, ligation, Southern blotting, Northern blotting, over expression of proteins, PCR analysis, protein-DNA interactions.

Module V : Cloning of Recombinant DNA

Module VI – cDNA Library Construction: Extraction of RNA , Purification of mRNA through Oligo-dT Column Chromatography, cDNA Construction , Incorporation of cDNA into a vector , Cloning of cDNAs

Module VII – Detection of Genetically Modified Organism:

Service Charges:

Duration: 30 to 45 Days

Rs 12,000 /- (4 Weeks Training) & Rs 15,000 (6 Weeks Training With Project Work)