



Biosolutions Pvt. Ltd.

Cytixon Biosolutions Pvt. Ltd.

We are best in delivering the best

Internship and Training Programmes



Module.1. Basics of Microbiology and Molecular Biology

Basics of Microbiology

- 1. Differential microbial staining**
- 2. Isolation of bacteria and fungi**
- 3. Different microbial culture techniques**
- 4. Antimicrobial sensitivity test**
- 5. Biochemical test for microbes**
- 6. Diagnosis of infectious disease by immuno assay kit**
- 7. Differential Leucocyte count**
- 8. ELISA/ RIA /PCR**

Molecular Biology

- 1. Isolation of DNA from different sources**
- 2. Separation of DNA by agarose gel Electrophoresis**
- 3. Chromosome mounting**
- 4. Barr body staining**

Module.2. Basics of Biochemistry and Bioinformatics

Bioinformatics

1. Biological databases
2. Retrieval of protein and nucleotide sequences
3. Visualization of protein structure
4. Pairwise sequence alignment using BLAST
5. Multiple sequence alignment using clustal - W
6. Construction of phylogenetic tree
7. Primer designing
8. Identification of functional domains from the proteins
9. Biological pathway studies

Biochemistry

1. Basics of Buffer preparation
2. Normality and Molarity and importance of pH
3. Qualitative analysis of bio molecules
 - A. Carbohydrates
 - B. Proteins
 - C. RNA
 - D. DNA
4. Paper chromatography of plant pigment and amino acids
5. Quantitative estimation of the biomolecules
 - A. Carbohydrates
 - B. Proteins
 - C. RNA
 - D. DNA

Module.3. Advance Training in Molecular Biology and Bioinformatics

Molecular Biology

1. Isolation and estimation of DNA from different biological sources
2. Agarose gel electrophoresis technique
3. Extraction and estimation of protein from different sources
4. Study of DNA cleavage using electrophoresis technique
5. Demonstration of column chromatography technique

Bio-informatics

1. Study of ADME properties
2. Ligand Preparation & Network pharmacology
3. Molecular and DNA docking study
4. Transcriptomics analysis
5. DNA/RNA sequence data analysis
6. Next Generation Sequencing analysis
7. Molecular simulation studies

Module.4. Animal cell culture Techniques

1. Sub culture
2. Seeding
3. Cryo preservation
4. Cell viability assay
5. Thawing
6. Morphological study of cancer cells using inverted microscope
7. Anticancer activity

Module.5. Phytochemistry and Pharmacology

- 1 Extraction methods of phytochemicals
- 2 Qualitative and quantitative phytochemical estimation
- 3 Separation of phytochemicals through TLC
- 4 Demonstration of column chromatography for phytochemical purification
- 5 Pharmacological studies
 - a. Anti-diabetic activity
 - b. Antimicrobial activity
 - c. Agar well method
 - d. Study of MIC
 - e. Antioxidant activity
 - f. PM assay
 - g. FRAP assay
 - h. Hydrogen peroxide assay
 - i. DPPH assay
 - j. Anti-inflammatory activity
 - k. Anticancer activity

Module.6. Nanotechnology

1. Preparation of different metal Nanoparticles using green and chemical method
2. Study of analysis and interpretation of biophysical and analytical techniques
 - a. FTIR
 - b. WAXD (XRD)
 - c. GCMS
 - d. HPLC
 - e. SEM EDS
 - f. TGA/DSC
 - g. UV/Vis Spectrometry
3. Biological Applications of Nanoparticles

Module.7. Polymer Membrane Technology

1. Selection of polymer materials
2. Preparation of polymer membranes
3. Characterization of developed membranes (FTIR, WAXD, TGA, DSC, SEM, AFM, UTM, PS, Zeta, CA and Water Barrier Properties)
4. Study of membrane applications (Food Packaging, Biomedical, Wound Healing, Tissue Engg, Solvent Separation and Energy Storage)

Module.8. Basics of Research Methodology

1. Basics of statistical tools and software's used in Research Excel, Graph, SPSS
2. Writing Paper, Dissertation thesis and Project reports importance of Plagiarism and tools used for Analysis of Research Data

Our Services

- * Cell Culture Based Assay
- * Microbiology
- * Flow cytometry Based Assay
- * Fluorescence Microscopy based studies
- * Phytochemistry
- * Molecular Biology Based Assay
- * Bioinformatics
- * Nanotechnology Based Services
- * Writing of Research Article, Dissertations
- * Ph.D Thesis

Instrument Facilities

FTIR, GCMS, SEM-EDS, XRD, PSA
ZETA, HPLC, TGA, CONTACT ANGLE
AFM, ELISA, UV

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SCAN ME!