

BIOTECHNOLOGY

One Month Hands on Training/Internship

Eligibility: Any Biological Science, Pharmacy, Agriculture candidate can join



TECHNIQUES TO BE COVERED

1. BIOTECHNOLOGY TOOLS & TECHNIQUES

- a. Using a Micropipette
- b. Calibrating Lab Instruments
- c. Solution preparation

2. MOLECULAR BIOLOGY TECHNIQUES

- a. DNA isolation from Plant Tissue
- b. DNA isolation from animal tissue
- c. DNA isolation from Bacteria.
- d. DNA isolation from Blood
- e. Agarose gel electrophoresis.
- f. PCR Technique

3. MICROBIOLOGY TECHNIQUES

- a. Isolation of Microbes: Pour plate technique, spread plate technique
- b. Purification of Microorganisms by Different streaking techniques.
- c. Preservation of purified cultures
- d. Grams Staining for Bacteria

- e. Lacto phenol Cotton blue staining for fungi
- f. Study of bacterial growth curve
- g. Antibiotic sensitivity test.

4. ENZYMOLOGY

- a. Isolation of microbes from suspected sources for production of particular enzyme
- b. Screening of cultures for enzyme production
- c. Production / Fermentation for enzyme production
- d. Preparation of crude enzyme
- e. Protein estimation by Lowry's method
- f. Salt precipitation
- g. Dialysis
- h. Ion exchange

5. PLANT TISSUE CULTURE

- a. Introduction to plant tissue culture
- b. Media Components and Preparation
- c. Explant Preparation
- d. Callus Induction
- e. Embryo culture
- f. Meristem Culture