



SYLLABUS FOR SUMMER TRAINING

Candidates will be trained under three major modules given below. However, depending on your interest you can consult your instructor for more details on any of the module.

MOLECULAR BIOLOGY

- DNA isolation from blood, saliva, bone, hair
- Qualitative & quantitative analysis of nucleic acid
- PCR techniques
- Electrophoresis like Agarose Gel and SDS PAGE
- Gel documentation
- DNA fingerprinting
- DNA sequencing

CYTOGENETICS

- Working in cell culture laboratory
- Safety precautions and sterilization procedures
- Peripheral blood cell culture
- Karyotyping
- G- banding technique
- C- banding technique
- R- banding technique
- Q- banding technique
- Fish technique

MICROBIOLOGY

- Media preparation & culturing of microbes, streaking, spreading etc.
- Primary & secondary screening of microbes
- Antibiotics sensitivity test
- Minimum inhibitory concentration (MIC) test
- Competent cell preparation
- Plasmid isolation
- Restriction digestion
- Ligation
- Transformation
- Blue-white colony screening
- Cloning PCR products

IMPORTANT NOTE: For the certification of all the above mentioned techniques, students have to submit a report and a small presentation of their work in the Genome Foundation.

GENOME FOUNDATION

**C/o Prasad Hospital, 44-617/2, First Floor, IDA Nacharam, Behind Telephone Exchange,
Nacharam, Hyderabad- 500 076**