

Training Programme in Molecular Cloning & Protein Expression

CCMB proposes a training course in Molecular Cloning & Protein Expression to generate human resources that are employment-ready for the requirements of industries and academia. The program targets students and employees from government labs/ Institutes, Industries, Hospitals, Pathology Laboratories, Universities with a view to train them to be able to establish a set-up for molecular cloning and protein expression at their respective institutes.

Duration	:	4 weeks
No. of seats	:	10-12 No.s
Education Qualifications	:	M.Sc., B.Tech., B.V.Sc., MBBS (minimum)
Age group	:	21-45 years (relaxation for SC/ST/OBC as per GOI rules)
Date of Commencement	:	18 th June 2018
Venue of the Course	:	iHub; Annexe-II, CSIR-CCMB
Course Fee	:	Rs. 25,000/- (self/sponsored)
Residential/non-residential	:	Residential (accommodation provided)

Sponsorship: Established public/private sectors are welcomed to sponsor candidates of their interest.

Training Curriculum for Basic Course:

- Principles of Handling of bacterial cell cultures, reagents preparation and equipment usage for cloning.
- Preparation of media for bacterial cell culture and maintenance of the bacterial strains.
- Competent cell preparation for recombinant cloning and protein expression.
- Polymerase chain reaction-Its principles and designing of oligos for the gene of interest.
- Plasmid vector preparation.
- Restriction digestion of the plasmid by restriction enzymes.
- Ligation and transformation of the ligated recombinant gene.
- Screening for positive clones and confirmation using colony PCR or restriction enzyme digestion and DNA sequencing.
- Transformation of the confirmed clone into expression host bacterial strain.
- In vivo protein expression standardization, standardization of purification strategies for the expressed protein and its analysis by SDS-PAGE.

Salient Features of the Training:

- 25% theory and 75% practical sessions are per the course curriculum.
- Hand-out information on teaching modules
- Tutorials (personal attention)
- Lectures are assisted with multimedia aids
- Central facility visits within the laboratory
- Evaluation by assignments and exams
- A certificate will be issued to the successful candidates