

Internship in Gene Cloning & Expression (CRISPER Technology)

The overall goal of the **Internship in Gene Cloning & Expression** training program is to provide the trainee with the skills they will need to provide appropriate cloning & expression technique for Cutting a piece of DNA from one organism and inserting it into a vector where it can be replicated by a host organism.

The trainee will also be prepared to describe indications for procedures used in cloning and sub-cloning techniques.

SCOPE OF THE TRAINING -

Bio- Pharmaceuticals : Mass-produce insulin, human growth hormones, human albumin, monoclonal antibodies, vaccines, and many other drugs.

Research : Organisms are genetically engineered to discover the functions of certain genes.

Industrial Applications - Mass production of proteins can be produced by growing the transformed organism in bioreactors using fermentation, then purifying the protein

TRAINING SYLLABUS

UNIT – 1

Basics of Genetic Engineering , Lab safety and Procedures , Record Maintenance, Handling of Equipments , Sterilization Techniques , Preparation of Chemical & Reagents

Discussion of ethical, legal, and social issues involved in genetic engineering

UNIT – 2

Extraction of Nucleic Acid - Both DNA & RNA (Protocol optimized by Chemgeneics Research Foundation)

Quantitative & Qualitative Analysis of Nucleic Acid - DNA & RNA Electrophoresis , Gel Docking or imaging .

Quantitative analysis by spectrometer – For DNA – Measure Absorbance at 260 & 280 nm
For RNA – Quantitative Analysis by Orisinol Method

Facilities Required For Unit – 2 :

Refrigerated Centrifuge , High Speed Refrigerated Centrifuge , DNA Speedvac Concentrator , Spectrophotometer ,Vortex Mixer , Dry Bath , Water Bath , Electrophoresis , Power Supply , Bio- safety Cabinet for RNA handling , Gel Documentation System .

UNIT 3 - Bioinformatics:

Primer Designing, Vectors , Selection of Restriction Sites, Virtual PCR, Bioinformatics tools & Techniques .

Facilities Required - Software for primer designing , vector selection , Virtual PCR

UNIT 4 - Re- Combinant DNA Technology:

Isolation of pUC18 plasmid from TOP10-pUC18 E coli cells , Restriction digestion of pUC 18 and λ DNA , Purifying pUC18/Hind III/ EcoR I digest by gel elution , Ligating the linearized plasmid -pUC18 and the insert λ -DNA. , Preparation of competent cells , Transformation of TOP10 cells with the pUC18- λ DNA ligated product

Colony PCR : To amplify the inserted λ DNA digest in pUC18 vector

Facilities Required for Unit – 4 : Thermocycler , Gradient Thermocycler , PCR Cabinet , PCR pipettes , Ice Flakes , Electrophoresis , Gel Documentation , Vectors and Restriction Endo - nucleases etc.

UNIT 5 – 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

Facilities Required for Unit – 4 : As given in unit - 2

Research Elective For Project Work : Participants may choose one area of interest -

- Transformation in bacterial cell
- Transformation in plant cell

INFORMATION TO APPLY FOR THE PROGRAM

WHO MAY JOIN ?

Students From Biotechnology , Microbiology , Biochemistry , Life Science , Chemistry , Pharmacy , Forensic Science , Food Science etc.

SELECTION CRITERIA : First come first serve

FEE FOR TRAINING PROGRAM : Rs 10,000 / - (For 30 Days Training)
Rs 12,000 /- (For 45 Days Training + Project Work)

APPROVAL OF THE TRAINING PROGRAM :

This training program is designed and approved by the organization Scientific Advisory Committee.

HOW TO APPLY –

Details of Documents :

1. Any identity proof along with University / College Identity Card
2. Filled Registration form of **Allele Life Sciences Pvt. Ltd.** with photograph
2. Registration fee will be Rs 1000 / -
3. Registration fee may be paid through cheque / Demand Draft or On Line Transfer :

Cheque or Demand Draft will be in favor of “ **Allele Life Sciences Pvt. Ltd.** ” payable at Noida or Service Branch

Details for on line Payment :

Kindly write us for bank or UPI Details at : allelelifesciences@gmail.com

For on Line Registration Send scan copy of all documents at : allelelifesciences@gmail.com

Note : Kindly send the receipt of the registration fee along with scan documents.

Those who pay through cheque or DD send all documents at following address :

Allele Life Sciences Pvt. Ltd.

C - 59 , Sector - 10 , Noida

Uttar Pradesh - 201301 , IN

Ph.No : + 91-9891179928

Note : We will send confirmation at your email address withi 7 days.

For Any other query mail at : allelelifesciences@gmail.com or Call at – 09891179928

Registration Form is Given at nest page

Photograph

Registration Form

Name of Training Program :

Expected Date of Joining :

Candidate Details :

Name: Mr./Ms. _____

Father's Name: _____

Address : _____

Contact No. : _____ Mobile No.: _____

Email: _____

Institution -

Qualification -

Terms & Conditions :

1. The admission to training / internship programs will be confirmed after the payment of registration fee along with documents.
2. The registration fee deposited is completely non refundable.
3. The industrial training fee includes the cost of chemical , reagents and study material costs.
4. I will deposit the service charges as decided by the company at the time of joining date of training program.
5. Students have to bear their own boarding/lodging /conveyance charges. We facilitate students in finding proper paying guest arrangements.
6. The trainees will have to bring their own lab coat and wear them all the time in the campus.
7. Trainees are selected on first come first serve basis
8. Trainees will maintain adequate discipline inside the lab premises.

DECLARATION

I _____ from _____

hereby declare that all statement/information given in the application form are true to the best of my knowledge and belief . I will strictly abide by the norms/lab etiquette during the training

Signature

Place: _____

Date: _____

For office use only