

Internship in Enzymology & Production

Bridging Gap Between Industry & Academia



Enzyme engineering deals with enhancement of enzyme activity of existing enzyme or inducing a new enzyme activity .

The overall goal of the **Training in Enzymology & Production** is to give the students more fundamental and practical knowledge about general rules for optimisation, modelling and design of enzymatic processes

OBJECTIVES :

- To develop the skill with latest technologies used in Enzyme Production
- Lab facility with dedicated scientific advisory and research assistants
- Documentation of all experimental work
- Data Handling and interpretation

1

PRODUCTION

Optimisation and production of enzyme at lab scale

2

PURIFICATION

Enzyme Purification or Industry Standard Downstream Process

3

CHARACTERISATION

Characterisation of enzyme by latest technologies

ENZYMولوجY

Selection of source



Optimisation



Purification



Food Enzyme

Pharma. Enzyme

Industrial Enzyme

Bio-Pharmaceutical

UNITS TO BE COVERED : - All Units are compulsory For Training in Genomics & Molecular Biology

Unit I - Lab safety Procedures, Instrumentation & Data Handling

Record Maintenance, Handling of Equipments , Sterilisation Techniques , Preparation of Chemical & Reagents. Discussion of ethical, legal, and social issues involved in genomics study and research.

Unit II - Enzyme Production & Optimisation

Enzyme Database Search, Enzyme source selection, optimisation of extraction procedures or growth requirement procedures, submerged and solid state fermentation (Lab Scale)

Extraction of Enzyme of Your Choice - Food Enzyme, Industrial Enzyme, Pharmaceutical Enzyme etc.

Unit III - Enzyme Assay, Simulation, Kinetics of Enzyme

Simulation Software handling, In-silico Experiment Designing, Enzyme Kinetics, Inhibition Studies, Effect of pH, Temperature, Substrate Concentration, Enzyme Concentration, Determination of K_{max} , V_{max} , Enzyme Inhibitors & Activators

Unit IV - Purification of Enzyme

Purification of Enzyme by Size Exclusion Chromatography, Affinity Chromatography, Ion Exchange Chromatography, Purification of Enzyme by HPLC, Centrifugation, Dialysis and Electrophoresis

Unit V - Enzyme Estimation & Quantitation

Enzyme estimation by Spectrophotometry & Chromatography - Bradford or BCA Assay , HPLC or FPLC Quantitation

Unit VI - Characterisation of Enzyme / Amino Acid

Enzyme Characterisation by Electrophoresis - SDS-PAGE , Native PAGE, Zymography, HPLC or FPLC

Unit VII- Project Work - Extract & Characterise Enzyme (Optional)

Search any biological source and extract enzyme of industrial importance of your choice as mini project work .

PROJECT WORK :

We will provide a project work of your interested area, our assigned projects will be on product development, basic research and novel idea . **We do respect and welcome all feasible ideas** suggested by you for technology development in life science research.

TECHNIQUES COVERED IN THIS PROGRAM :

Enzyme Extraction & Optimisation, Simulation Studies for enzyme kinetics, Enzyme estimation by spectrophotometer, Enzyme Purification by FPLC,, Affinity , HPLC or Gas Chromatography, Enzyme characterisation by SDS-PAGE and electrophoresis, Fermentation

BENEFITS OF THE TRAINING PROGRAM :

1. Research & Development in Enzymology
2. Important tool for mass production of Bio-Pharma, Food & Beverage Sectors
3. Exposure to Production - Purification - Characterisation with Industry Standard Techniques
4. Bridging Gap in Academic Program
5. Boost your confidence

INFORMATION TO APPLY FOR THE PROGRAM

WHO MAY JOIN :-

Any enthusiast and dedicated learner from life science, biotechnology, chemistry or applied sciences

SELECTION CRITERIA:-

First come first serve basis



TRAINING FEE :

Rs 10,000 / - For 30 Days Training & Rs 12,000 /-For 45 Days (Training + Project Work)

HOW TO APPLY –

Details of Documents :

1. Any identity proof along with University / College Identity Card
2. Filled **Registration form** with photograph (Given in Brochure)
2. Registration fee will be Rs 1000 / - paid through cheque or on line payment

How to pay Registration Fee :

1. Cheque will be in favour of **Allele Life Sciences Private Limited**
2. **For on line payment detail send request at : allelelifesciences@gmail.com**

How to send document :

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

Allele Life Sciences Pvt. Ltd.

C - 59 , Sector - 10 , Noida
Uttar Pradesh - 201301 , IN
Ph.No : + 91-9891179928

Those who opt on Line registration send scan copy of all documents and receipt of online payment at : allelelifesciences@gmail.com

Note : We will send confirmation within specified time. If not received send a reminder mail.

For Any other query mail at : allelelifesciences@gmail.com or WhatsApp - 9891179928

Registration Form is Given at nest page



Registration Form

Name of Training Program :

Expected Date of Joining :

Candidate Details :

Name:

Father's Name:

Address :

Contact 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

