



# Industry Ready Training Bio Pharmaceutical Science

## Our Benefit :



Get Certificate



On Time Training



100 % Hands on  
learning



+91-9891179928 ( WhatsApp Only )

allelelifesciences@gmail.com

www.allelelifesciences.com



## OUR PEDAGOGY

Our training programs are specially designed for the betterment of students career to help them capture knowledge on emerging technologies and to improve skills in Bio Pharmaceutical Research.



## WHY TRAINING ?

One of the main reasons why freshers find it difficult to get employment in the industry is the lack of hands-on experience. Our mission to get students industry-ready in Bio Pharma Sector.

## WHO WILL BE BENEFITED

- Looking to get admission in Ph.D. from foreign university
- Career opportunities in Bio Pharmaceutical Research
- You may consider as Pre Ph.D. Program

### DURATION & FEE :

- 3 Months
- INR 30,000

## HANDS ON EXPERIENCE ON MAJOR TOOL & TECHNIQUES:

- Animal Cell Biology - Culture, Inverted Microscopy, Fluorescence Microscopy & Image Analysis, Apoptosis, Cytotoxicity
- Nucleic Acid Extraction Techniques, PCR & Real Time PCR Analysis, Methylation & rDNA Technology
- Protein Purification by FPLC, Ion Exchange, Affinity Chromatography, Microplate Assay, ELISA, Immuno Fluorescence Assay, SDS-PAGE & BLOT Techniques. Analysis of AAA by HPLC, Fluorescence Detection by HPLC-FLD
- Microbial Techniques, Enzyme Production & Analysis
- Gas Chromatography, Bio-Separation Techniques, Nano Particle Synthesis, Analysis, Botanical Secondary Metabolite Extraction, Drug Analysis.



## Basics Bio-Pharma Analysis Lab & Analytical Procedures

Unit 1: Lab safety and Analytical Procedures , Chemical & Reagent Preparation

Unit 2: Soxhlet Extraction, Drying the solvent by Vacuum Rotary Evaporator

Unit 3: Qualitative assay of Herbals - Assay of Alkaloids, Flavonoids, Terpinenes, Glycosides, Free Glucose, tannins, Anthraquinone, Saponins, Phenols etc

Unit 4: Quantitative assay of Total Phenolics

Unit 5: Quantitative assay of Total Flavonoids



## Cell based Assay, MIC & Anti Microbial Assay

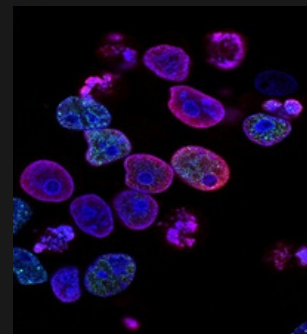
Unit 6: Cell Culture Lab Safety, Microscopy, Basics of Cell Culture

Unit 7: Culture of a Continuously Growing Cell Line

Unit 8: MTT Assay for cytotoxicity analysis

Unit 9: Determination of minimum inhibitory concentration

Unit 10: Anti-Microbial assay of extracted crude extract ( ELISA based )



## Antioxidant / Oxidative Stress Assay

Unit 11: Inhibition Concentration (IC<sub>50</sub>) of Antioxidant activity

Unit 12: In vitro radical scavenging assay & data analysis

Unit 13: Reducing Power assay of herbal extract

Unit 14: Analysis of Catalase test in herbal sample

Unit 15: superoxide dismutase (SOD) activity



## Chromatography Separation & Analysis

Unit 16: Purification of herbal extract by column chromatography

Unit 17: Analysis of fractions by TLC

Unit 18: Spectrophotometric analysis of crude fraction

Unit 19: Basics of High Performance Liquid Chromatography

Unit 20: Sample Analysis & Data Analysis of HPLC



## 1st Week - Basics of Pharma Biotech Lab & Microbiology

Unit 21: Lab safety and Procedures , Chemical & Reagent Preparation

Unit 22: Simple & Serial Dilution, Moles and Molar Solutions

Unit 23: Growth Curve Analysis of Microbial Culture

Unit 24: Enumeration of Microbes & Colony Counting

Unit 25: Colony Morphology & Survival Analysis





## Lab Safety & Nucleic Acids

Unit 26: Genetics Lab safety and Procedures ,Chemical & Reagent Preparation

Unit 27: DNA Extraction & Optimization of Protocol

Unit 28: Quantitative & Qualitative Analysis of DNA

Unit 29: Lab Safety for RNA, Total RNA Extraction & Optimization

Unit 30: Quantitative & Qualitative Analysis of RNA



## Bioinformatics, cDNA Synthesis & PCR Run

Unit 31: Bioinformatics: Primer Designing, Vectors, Selection of Restriction Sites, Virtual PCR, other Bioinformatics tools & Techniques

Unit 32: mRNA Purification & First Strand cDNA Synthesis

Unit 33: Optimisation of PCR Reaction – Melting Point , GC Content , Concentrations and Cycles, Sample Preparation For PCR Analysis, PCR sample Run

Unit 34: Analysis of PCR sample

Unit 35: Qualitative RT- PCR sample run & Analysis



## rDNA Technology

Unit 36: Isolation of pUC18 plasmid from TOP10-pUC18 E coli cells

Unit 37: Restriction digestion of pUC 18 and  $\lambda$  DNA & Purifying pUC18/Hind III/ EcoR I digest by gel elution

Unit 38: Ligating the linearized plasmid -pUC18 and the insert – $\lambda$ DNA

Unit 39: Preparation of competent cells

Unit 40: Transformation of TOP10 cells with the pUC18- $\lambda$ DNA ligated Product & Confirmation by PCR



## Lab Scale Up Stream processing

Unit 41: Microbial Selection & Preparation for Protein Production

Unit 42: Medium Optimization by Plackett and Burman Design

Unit 43: Effect of pH on enzyme activity

Unit 44: Effect of temperature on enzyme activity

Unit 45: Batch Growth Kinetics of Microbe



## Lab Scale Down Stream processing

Unit 46: Extraction of Protein from microbial culture

Unit 47: Ammonium sulfate precipitation & Estimation

Unit 48: Dialysis or Desalting of Protein Sample

Unit 49: Preparation for Protein Purification Strategies

Unit 50: Molecular Weight determination by SDS-PAGE



## Pharmaceutical Analysis Lab & Analytical Procedures

Unit 51: Lab safety and Chemistry Lab Procedures , Chemical & Reagent Preparation

Unit 52: Calibration of balance, pH Meter and apparatus, Acid-base titration

Unit 53: Moisture content analysis, Dissolved Oxygen Analysis, TDS, Nitrogen Potentiometric Analysis, Refractive Index determination.

Unit 54: Chromatography Procedures - Column Chromatography, TLC, HPLC & GC

Unit 55: Spectrophotometric Analysis



## Qualitative Analysis of Pharmaceutical Drugs

Unit 56: Determination of % purity of ammonium chloride

Unit 57: Partition Coefficient of Benzoic acid between benzene & water

Unit 58: Assay & Analysis of aspirin

Unit 59: To perform analysis of paracetamol

Unit 60: To carry out the Assay of furosemide tablets.



## Analysis of Pharmaceutical Finished Products

Unit 61: Analysis of Erythromycin tablet

Unit 62: Pharmaceutical Analysis of Ethambutol Tablets

Unit 63: Pharmaceutical Analysis of Ethosuximide Syrup

Unit 64: Analysis of Metronidazole Injection

Unit 65: Atropine Eye Ointment Analysis



## Food Sample Analysis by HPLC & Gas Chromatography

Unit 66: Basics of High Performance Liquid Chromatography & Gas Chromatography

Unit 67: Software, application in HPLC and Data Analysis

Unit 68: Software & Its application in Gas Chromatography

Unit 69: Sample, Standard and Solvent Preparation for HPLC

Unit 70: Sample Run & Data Analysis



**Cost of Training :** INR 30,000 / -

**Duration :** Three Months



## Address Office:

A : C-59, Sector-10, Industrial Area, Noida, Uttar Pradesh, India - 201301

P : +91-9891179928

E : [info@allelelifesciences.com](mailto:info@allelelifesciences.com)



## PERSONAL INFORMATION

Full Name :

Address :

Nationality :

Institution ( If Any )

Phone :

Email :

Name of Training :

## 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 Rs 1000/- deposited is completely non refundable.
3. I will deposit the service charges as decided by the company in brochure at the time of joining date of training program.
4. Students have to bear their own boarding/lodging /conveyance charges.
5. Trainees will maintain adequate discipline & lab safety inside the lab premises.
6. Company will not be responsible for any medical, legal issues during the internship tenure.

## Declaration

I  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 terms & conditions, norms, lab etiquette during the training .

Pay Registration Fee for confirmation of seat for training program.  
Send the copy of the form, payment detail and any identity proof at :  
[info@allelelifesciences.com](mailto:info@allelelifesciences.com)



[allelelifesciences@upi](mailto:allelelifesciences@upi)

## THANK YOU FOR REGISTRATION

We will send your training confirmation letter at your Email ID given in the registration form

Trainee Signature

## More Information :

If you do not receive confirmation letter kindly WhatsApp your details at:  
9891179928

[www.allelelifesciences.com](http://www.allelelifesciences.com)



## CONTACT US —

### ALLELE LIFE SCIENCES PVT. LTD

C-59, Sector-10, Industrial Area, Noida, Uttar Pradesh, India - 201301

WhatsApp: 9891179928

Email: [info@allelelifesciences.com](mailto:info@allelelifesciences.com)

Web: [www.allelelifesciences.com](http://www.allelelifesciences.com)

## OUR SERVICES

### GENOMICS SERVICES

- Sequencing Services
- PCR & Real Time PCR Services
- Gene Cloning
- Genotyping Services
- Epigenetic Analysis
- Microbiome Analysis
- Nutrigenomics Analysis
- Plant Genomics

### PROTEIN CHEMISTRY

- Protein Purification
- Protein Analysis
- Peptide Synthesis
- Peptide Modification
- Peptide Labelling
- Antibody Purification
- Enzyme Production
- Enzyme Analysis

### BIOLOGICAL ASSAY

- In-Vitro Cell Assay
- Microbial Assay
- Antioxidant Assay
- Oxidative Stress Assay
- Toxicity Assay
- Nanotechnology Assay
- Bio-Chemical Assay
- Immunology Assay

### ANALYTICAL SERVICES

- HPLC Analysis
- GC Analysis
- Mass Spectrometry Analysis
- Vitamin Analysis
- GMO Analysis
- Amino Acid Analysis
- Allergen Analysis
- Trace Analysis

## OUR PRODUCTS

- Molecular Biology Reagents
- Biochemical Analysis
- Protein Analysis Reagents
- Cell Culture Products
- Plant Research Products
- Lab Equipment