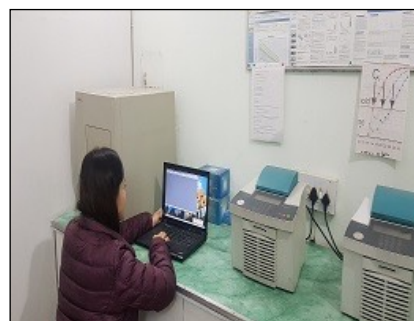
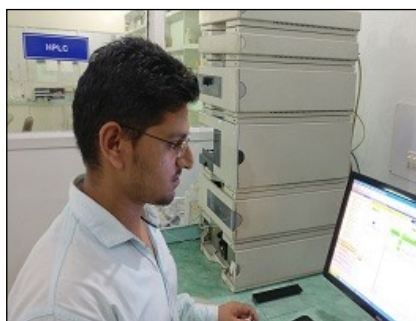


## WEEKEND TRAINING WORKSHOP

There are plenty of good opportunities in research, analytical testing, quality control, dairies, production and marketing.” Other options include working in analytical testing lab, pharmaceutical industry, food industry, cosmetic industry, fragrance industry, water testing lab, poultry farm, nut processing industry, frozen food units, the food processing division in catering units, distilleries and packaging industry .



### IMPORTANT INFORMATION -

- The Workshop will be of 2 Days ( Full Days )
- The Workshop will be commenced on Every Saturday & Sunday ( August to April )
- We do not conduct any workshop in May, June & July
- **Registration only after the confirmation through e.mail ( Start process before 30 days )**
- After registration we will assign a date of any workshop of your choice
- Kindly make full payment for the workshop
- Our prime motive is “Bridging Gap Between Industry & Academia”
- Rs 500 / - Discount For a Student Group of Any Institution ( Minimum 10 is required )

NAME OF TRAINING PROGRAM	DURATION	WORKSHOP FEE
Training Workshop on Bio- Separation By HPLC	2 Days	Rs 3,500 / -
Training Workshop on Gas Chromatography	2 Days	Rs 3,500 / -
Training Workshop on PCR	2 Days	Rs 1,500 / -
Training Workshop on Real Time PCR	2 Days	Rs 4,000 / -
Training Workshop on Protein Purification by FPLC	2 Days	Rs 3,500 / -
Training Workshop on 2 - D Electrophoresis	2 Days	Rs 4,000 / -

## TRAINING WORKSHOP ON BIO-SEPARATION BY HPLC

### Introduction to HPLC :-

Introduction to chromatography and chromatographic process - four modes of chromatography - reversed-phase, normal phase, ion exchange and size exclusion, Instrument operation each part of an HPLC instrument in detail – including the solvent delivery system, sample injection, connecting tubing and fittings, commonly used detectors

### Method Development Procedures :

Sample solvents, Column selection, Partition coefficient, Mobile phase selection, Gradients, Effect of flow rate, Temperature effects and Sample preparation.

### Analysis of Sample by HPLC :

Sample Preparation , Gradient Making , Parts of HPLC , Troubleshooting and Maintenance , Operating Procedure of HPLC , Run the sample in HPLC . Data Analysis

### Data Analysis & Software :

## TRAINING WORKSHOP ON GC ANALYTICAL PROCEDURES

### COURSE CONTENT

#### Introduction to Gas Chromatography :-

The theory of GC, The GC System, Column types and packings, Mobile phases, the chromatogram, Familiarisation with the instrument, Basic Operations

#### Method Development Procedures :

**Hardware / System Validation. Topics include:** Hardware validation for injectors , Oven Temperature , auto samplers, Gas Ports and detectors, and overall system check.

**Method Validation Topics include:** Accuracy, Precision, Intermediate Precision, Specificity, Detection limit, Quantitation Limit, Linearity, Robustness, Acceptance criteria, Samples with more than one active.

#### Analysis of Sample by GC :

Sample Preparation , Gradient Making , Troubleshooting and Maintenance , Operating Procedure of GC , Run the sample in GC

#### Data Analysis & Software :

## TRAINING WORKSHOP ON PCR TECHNIQUE

### COURSE CONTENT

**Introduction to PCR Topics include:** The theory of PCR , Applications of PCR , Types of PCR Reactions , Requirement of optimisation etc.

**Nucleic Acid Extraction , Quality Control Topics include:** Extraction of Nucleic Acid , Gel Electrophoresis , Quantitative and Qualitative Analysis of Samples , Troubleshooting of Nucleic Acid Extraction

**Primer Designing & Selection Topics include:** Primer designing for cloning & Expression , Primer Selection for Molecular Marker Analysis

**PCR Optimisation Topics include:** GC contents in Primers , Role of annealing temperature , Role of Contamination , Role of PCR Cycles etc.

**Troubleshooting Topics include:** Order of troubleshooting, Examples of common problems and causes, Practical examples.

**PCR Run for Reactions Topics include:** Run of PCR reactions for biological samples Module Seven – Analysis of PCR Results Topics include: Analysis of results

## TRAINING WORKSHOP ON REAL TIME PCR ANALYSIS

### COURSE CONTENT

**Introduction to Real-time PCR & Applications:**

Fluorescence Principles, Absorption and emission of fluorophores; Fluorescence resonance energy transfer (FRET), DNA intercalating dyes, and Probe based detection strategies.

**Real-time PCR reaction setup: Construction of a standard curve:**

Biostatistics principles; Linear regression , Standard melt curve analysis ,High resolution melt curve analysis  
Practical Session II: Hands-on real-time PCR experience,Delegates set up their own SYBR Green real-time PCR reactions, Real-time PCR optimisation

**Analysis of SYBR Green real-time PCR results:**

Melt curve analysis , Compare results from practical sessions I and II , Identify factors affecting success of real-time PCR reactions: Primer dimers; GLP aspects . Amplification efficiency : Impact of efficiency of a PCR assay on the quantification results ,Role of amplification efficiency in validation of assays , Primer and probe design, and synthesis

**Troubleshooting of real-time PCR reactions:**

Data analysis of real-time PCR reactions: Step-for-step analysis, Absolute quantification, Relative quantification, Allelic discrimination, Plus/Minus assays.

## TRAINING WORKSHOP ON PROTEIN PURIFICATION

### COURSE CONTENT

#### Introduction to Protein Extraction :-

Acid Base Equilibrium, pH, Buffer System, Charge, pI and pKa Value, Quantitative determination of biomolecule, mini scale bacterial protein extraction, protein extraction from plant source or other biological source

#### Introduction to Protein Purification :-

Sample solvents, Column selection, Partition coefficient, Mobile phase selection, Gradients, Effect of flow rate, Temperature effects and Sample preparation., Challenges in Protein Purification

#### Protein Purification by FPLC :

Affinity Chromatography ( IMAC, GST Tagged Purification, Talon resin, Glutathione Sepharose, Heparin Sepharose, Streptavidin Sepharose, anti-Flag, Protein A, Protein G

#### Data Analysis

## TRAINING WORKSHOP ON 2-D ELECTROPHORESIS

**Protein Extraction :** Acid Base Equilibrium, pH, Buffer System, Charge, pI and pKa Value, Quantitative determination of biomolecule, mini scale bacterial protein extraction, protein extraction from plant source or other biological source

**Protein Estimation :** Protein Estimation by Lowry Method / BCA Method / Bradford Method

**Iso Electric Focusing of Proteins :** Iso Electric Focusing of Proteins in Ultra-Thin Polyacrylamide Gels

**2-D Protein Electrophoresis :** Preparation of Protein sample for 2-D Electrophoresis, Protein solubility in 2-D Electrophoresis, Disruption of Di-sulphide bridges, Two Dimensional Polyacrylamide Gel Electrophoresis of Proteins using pH Gradient in First Dimension.

**SDS-PAGE:** Basics of SDS-PAGE, Acetic-Acid Urea Polyacrylamide Electrophoresis of basic proteins

#### Data Analysis

## TRAINING FEE:


NAME OF TRAINING PROGRAM	DURATION	WORKSHOP FEE
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Training Workshop on 2 - D Electrophoresis	2 Days	Rs 3,500 / -

**Registration only after the confirmation through e.mail ( Start process before 30 days )**

## HOW TO APPLY –

### Details of Documents For Registration :

1. Scan copy of Any identity proof along with University / College Identity Card / Aadhar Card etc.
2. Filled **Registration form** with photograph ( Given in Last Page of Brochure )
3. **Registration fee** will be Rs 3,500 / - paid through on line
4. After payment send all documents with payment receipt at : [chemgeneics@gmail.com](mailto:chemgeneics@gmail.com) or Whatsapp - 8377082003
5. We will send confirmation within specified time through e.mail or remind us if not received at our email.

Payment By Internet Banking	Scan UPI Code
<p><b>Beneficiary Name : CHEMGENEICS RESEARCH FOUNDATION</b> <b>Account Number : 50100155305810</b> <b>IFSC Code : HDFC0001223</b> <b>Name of Bank : HDFC Bank</b> <b>Branch Address : Sec - 12, Noida - 201301</b></p> <p><b>Pay Through UPI</b> <b>UPI Address - cgrf@upi</b></p>	

## 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.
9. Company will not be responsible for any medical, legal issues during the internship tenure.

### 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**