

# 3 Month Online Project on **In-silico Drug Designing**

02 Jan – 01 April 2022 (6pm to 8pm, Mon – Fri)

## Recognitions



ISO 9001:2015  
ISO 14001:2015  
ISO 45001:2018

# CytoGene, Lucknow

## The Leader in Training

Founded 10 years ago in 2011, CytoGene® has grown rapidly to become the leader in training in Biotechnology/Life Sciences. With completing the training 3,500 trainees across India, The trainers are more focused to train students professionally to make the things understand easily for any range of participants. We are trusted by the students of more than 250 universities across India.

### Registered by -

CytoGene Research & Development, Lucknow is an autonomous Registered organization by Ministry of corporate affairs, Government of India under section 12(1) of LLP Act 2008.

### Certified by -

ISO 9001:2015  
ISO 14001:2015  
ISO 45001:2018

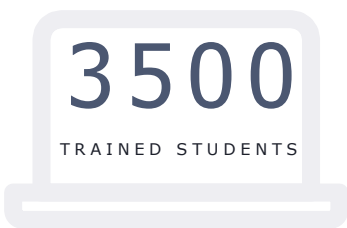
### Member of -

IIA (Indian Industries Association)  
CII (Confederation of Indian Industries)

### Facilities provided -

Contract Research Services  
Testing and Analysis of Samples & Formulations  
Training / Faculty Development Program  
Workshop (Indoor & Outdoor)

CytoGene Research & Development is offering this online training through video meeting/ MS Team. The aim is to provide hustle free training of all your need. The techniques are categorised on the basis of application of your requirement. We hope you will find all your needs in the given training program.



**ONE  
DECADE**  
OF EXPERIENCE IN  
TRAINING AND  
STILL COUNTING..

**100%**  
ACCURACY

“

As the scenario of COVID-19, everyone has seen the importance of Bioinformatics to develop Medicine / Vaccine. Its best time to upgrade yourself as no research will be possible without use of Bioinformatic tools.

”

Sujeet Kumar Singh, Director, CytoGene Research & Development, Lucknow

# Why Project ?

Learn the future oriented tools in deep.

Have enough data to publish in UGC/SCOPUS level of journals

Practice individually

All the sessions will be recorded and stored till end of the project

To Complete the dissertation of Final year students

Session in evening to reduce the disturbance from routine work

# Why Bioinformatics ?

1. *It can be done Online*
2. *Integral part of any research*
3. *Fast processing/output*
4. *Vast area of coverage*
5. *Availability of large data size*
6. *Opportunity to Explore  
enormous research activities*
7. *Capacity to build whole career*

# Why CytoGene?

Dedicated  
Experts

Individual  
Practice

A decade of  
Experience

Updated  
Syllabus

## OUR EXPERTS

We provide training to the candidate from beginning by considering them at zero. Each and every steps are cleared along with the live example to let the candidate understand it well. All the expert are too dedicated to consider each and every candidate to understand the concept and tools.

## THE SYLLABUS

Our syllabus are designed in such a way to facilitate trainees with interactive courses, enlightening videos and practical simulations, allowing training to learn in the modality that works best for them. Our experts and mentors are well qualified and have at least 5 years of experience and a 98% customer satisfaction rating.

“ The CytoGene research & Development plays a pivotal role in the success of the development and execution of the technical strategy for Bioinformatics ”

Madhulika Singh, Research Co-ordinator, CytoGene, Lucknow

# Project includes..



## LITERATURE STUDY ON THE SELECTED TOPIC

This includes a thorough background study related to the required material by the research. This helps the candidate to gain basic knowledge on the topic.



## SYNOPSIS PRESENTATION

A layout of the entire work in the form of synopsis is prepared by the candidate under the guidance of the faculty. Synopsis is then presented by the candidate in the form of presentation to the guide and other faculty members. After correction candidate can move to next step..



## TARGET SELECTION & PRACTICAL

Candidate has to select the targets from the data base as mentioned in their synopsis. This is the major step of the program. Candidate has to complete his/her entire practical work under the guidance of the faculty. No work will be done by the faculty, candidate has to perform the entire work by themselves.



## DATA MANAGEMENT AND RESULT ANALYSIS

All the results obtained during the work must be managed in very organised form and complete its analysis.



## REVIEW OF COMPLETE WORK

A review of the complete work followed by the viva voice is done for every student individually



## REPORT PREPARATION

A compilation of entire work in the form of thesis is prepared by every student. All the steps will be performed by the students under constant guidance of faculty

## PROJECT SCHEDULE

S.N.	Work to be done	Duration
1	Synopsis Preparation	02 Jan-10 Jan 2022
2	Dry Lab (Drug Designing)	11 Jan-11 Mar 2022
3	Data Analysis & Report Preparation	12 Mar-01 Apr 2022

# TECHNIQUES TO BE USED EXTENSIVELY...

- 1 Protein retrieval and Active site prediction  
(RCSB - PDB, Discovery studio, CASTp)
- 2 Selection of ligand and Dataset preparation  
(PubChem, ChemSpider, Open Babel)
- 3 Drug likeliness of compound and Screening of  
ligands on basis of Lipinski rule of 5
- 4 Ligand property prediction and screening  
(DriLiTo, ADMET-SAR, Swiss-ADME)



- 5 Homology modelling for structure of unknown proteins
- 6 Protein and Ligand Preparation on ADT
- 7 Docking in Autodock Vina
- 8 Docking in PyRx
- 9 Interaction of Protein-ligand residues in the active site using LigPlot
- 10 Poses analysis using PyMol

11 Molecular Dynamics Simulation using

GROMACS

12 Analysis of the plots of simulation

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## COMPULSORY REQUIREMENT

- ❖ *A computer with Basic configuration*
- ❖ *An uninterrupted Internet Connection*

## ELIGIBILITY

- ❖ Students of UG, PG, PhD Scholar & Faculty Members from any stream of Life Sciences/ Biotechnology

# Trainers for this Project...



**Dr. Madhulika Singh**

**Area of Specialisation:** Molecular Biology & Bioinformatics

**Research Experience:** 8+ years  
**Trainees Undergone:** 2500+

**Dr. Tushar Joshi**

**Area of Specialisation:** Molecular Modelling & Simulations

**Research Experience:** 7+ years  
**Trainees Undergone:** 900+



**Ms. Tahura Mariyam**

**Area of Specialisation:** Bioinformatics & Food Technology

**Research Experience:** 3+ years  
**Trainees Undergone:** 400+

# PUBLICATION

*In future participants can publish the data collected during the project work.*

*As each member will work separately, no data will be shared in between and it will be unique enough to publish it.*

*CytoGene has no role in Publication of data obtained in this project. Independently candidate can publish it.*

*Candidate may put a name from cytoGene in authorship while publishing the data or can acknowledge us.*

“

“The variety of tools and techniques inculcated by CytoGene gives Trainees a Strategic advantage as we continue to witness rapid technical growth.

”

Dr. Umashankar, Consultant Scientist, CytoGene Research & Development, Lucknow

**PROJECT FEE (TOTAL)**

**₹ 16,000/-**

**PAYMENT SCHEDULE**

**AT THE TIME OF REGISTRATION**

**₹ 1,000/-**

**IN BETWEEN 25 DEC - 31 DEC 2021**

**₹ 5,000/-**

**IN BETWEEN 25 JAN - 31 JAN 2022**

**₹ 5,000/-**

**IN BETWEEN 25 FEB - 28 FEB 2022**

**₹ 5,000/-**

**COMPLETE PAYMENT AT ONE GO**

**₹ 15,000/-**

If someone wants pay complete payment in one time, the registration fee (₹1,000/-) will be viewed off

# ONLINE REGISTRATION

## EASY 3 STEPS



Visit to

[www.cytogene.in](http://www.cytogene.in)



Registration



Exclusive Registration  
Form



Fill the Form

Fill the form completely and  
**submit**



Do Payment

Visit the **Mode of payment**  
page and do the Payment.

Share the screenshot of

Payment by Email to

[services@cytogene.in](mailto:services@cytogene.in) or by

Whatsapp to **7703092222**

**Total no of Seats - 30**

Last Date to Apply **05 December 2021**

**(First come first serve basis)**



# IMPORTANT DATES

Date of Notification



Start date of Registration



Last date of Registration



Seat Allotment will be based on

**"First come first serve"**

**Total no of Seats - 30**

# KEY FEATURES

- ✓ MS Team Online Platform will be used
- ✓ All the sessions will be recorded
- ✓ All Candidate will perform their own project
- ✓ Every topic will slightly vary
- ✓ Everyone can publish their data
- ✓ Duration of the project is 3 month
- ✓ Sessions will be in Evening (06-08 pm)
- ✓ Total No of Seats – 30 (First Come First Serve)

## CONTACT PERSON

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CYTOGENE RESEARCH & DEVELOPMENT

### **Reporting Office**

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Jankipuram, Lucknow - 226021

### **Laboratory**

K-51, Agro Park  
UPSIDC Industrial Area, Kursi Road  
(Lucknow) Dist - Barabanki – 225001