Curriculum Vitae

Name	**MANISHA YADAV**
Date of Birth	13th June 1987
Address	W/o Mr. D. K. Yadav, 2D, Str.3A, Sector 10 Bhilai (CG.)
Contact No.	8989266314
Email Id	manishayadav.nitrr@gmail.com , manuomyadav@gmail.com
Nationality	Indian
Area of specialization	Bioinformatics & Biotechnology Computer-aided drug discovery Molecular Modeling Molecular Dynamics Simulation Pharmacokinetics
ResearchGate Profile	Manisha YADAV | Doctor of Philosophy | National Institute of Technology Raipur, Raipur | NIT Raipur | Department of Bio Technology (researchgate.net)
LinkedIn profile	Manisha Yadav - Softvision Institute of Technology & Science, Vijay Nagar, Indore - India | LinkedIn
Membership of Professional Societies	Registered in NASSCOM
Objective	To be a member of highly professional group that ensures all around growth and development of the individual and the organization. To obtain a career as Bioinformatics Analyst and contribute my knowledge of Molecular Biology and Computer Science in research for Drug Discovery and developing human diseases cure.

ACADEMIC QUALIFICATIONS

Year	Course	Institute	Percentage
2018-23	**Ph.D. (Biotechnology)**	NIT Raipur	Awarded (2024)
2015-17	**M.Sc. (Biotechnology)**	D.A.V.V. Indore (M.P.)	66.4%
2009-13	**Post Graduate Diploma In Business Administration** (Operations & Marketing)	Symbiosis Centre for Distance Learning, PUNE	A+
2005-08	**B.Sc. (Bioinformatics)**	D.A.V.V. Indore (M.P.)	70%
2005	Class XII	M.P. Board	89.4 %
2003	Class X	M.P. Board	89%

International Research Publications: 10
Books Publications: 1 Published & 2 In Press

PRESENT EMPLOYMENT:

- *From October 2025 to till date*

Govt. Digvijay Autonomous College Rajnandgaon. (C. G.)
Department of Botany
Guest Lecturer

PREVIOUS EMPLOYMENT:

- *From August 2018 to January 2023*

National Institute of Technology, Raipur ***(C.G.)***
Department of Biotechnology
PhD
Computer-Aided Drug Discovery of Anticancer Lipopeptides.

From January 2018 to August 2018
National Institute of Technology, Raipur ***(C.G.)***
Department of Biotechnology
Project Assistant (CGCOST)

Project: Computer aided drug designing of peptide-based drugs: Lipopeptides

- Application of Schrödinger Maestro suite for drug designing
- Homology modeling for protein structure prediction
- Target Identification
- Molecular docking to visualize ligand - protein (Drug-Target) interaction and binding affinity
- ADMET and toxicity analysis
- Quantitative structure activity relationship (QSAR) study
- Pharmacophore Kinetics
- Antibiotic Resistance
- Writing research articles

- *From Jan 2016 to Dec 2017 (M.Sc. Dissertation)*

With ***Eminent Biosciences*** *Indore (M.P.)*
As ***Bioinformatics Research Associate***

- Molecular Docking
- Molecular Modeling
- Virtual Screening - Screen best docked compounds to identify High Affinity Compounds as Potential Inhibitors
- Genomic & Protein Sequence Analysis using Computer-based tools
- Homology Modeling, Protein Structure Prediction & Protein Modeling
- Analyzing cancer genomic data using appropriate analytical tools
- Researching & reading literature to find the Potent Inhibitor for diseasive gene & understanding the biological pathways.
- Collecting, and performing quality analysis on data
- Presenting research data to internal and external researchers
- Coordinating with laboratory personnel and preparing figures and data for validation

From July 2008 to October 2010

With ***GENPACT INDIA Pvt. Ltd.*** **Gurgaon**
As **Senior Process Associate (Genworth Financial, GLIC/GLAIC, U.S.A.)**

- Managing Production Reports on hourly and daily basis.
- Preparing Login and Log out report to ensure maximum Time on System to get the maximum output to meet the client's expectation.
- Preparing Client Review and Weekly Reports of Processed Medical Policies.
- Tech Support: Apart from core job I supported team on trouble shooting on technical issues
- Follow up LEAN (Cost Control, elimination of waste, Lean tools and 5-S concept) and SIX SIGMA Training & Meetings for implementation and Standardization of Business Process.
- Efficiency analysis and Touch Time analysis of policies to reduce the Cycle Time.

From July 2008 to June 2010
With ***GENPACT INDIA Pvt. Ltd., Gurgaon.***
As PROCESS ASSOCIATE

- Summarization of Part II Medical forms containing Medical History of Proposed Insured.
- Categorization of Proposed Insured and decision making on the basis of medical reports and health history.
- Processing of Medical files, i.e. Examiner Report, Lab report and Lab Slip under Software called Genius II, which Underwrites Policies to calculate the premium on the basis of Health History, Medical details and current reports of Proposed Insured.
- Process Training of Examiner Report and Part II Medical Form containing a brief description of medical terminologies, diseases, related symptoms, medical tests, given Treatment, Duration and Medications.

CORPORATE TRANINGS

1. Six months Training program for "Bioinformatics Tools & Softwares" (Genomics, Proteomics & Drug Designing) from Eminent Biosciences, Indore (M.P.)
2. Executive English & Personality Development Program from NIIT UNIQUA
3. Conference Calls Essentials (U.S. based clients)
4. BPO Training from People Tree, Indore (Branch of Tech Tree, Bangalore)
5. Professional training on Email & Business Writing Skills

COMPUTER SKILLS

1. Programming Language : Bash Scripting, C++
2. Operating Systems : Mac, Linux, Windows 10, MS-Office, MS-Excel, Power point
3. CUDA Computing, Graphics Processing Unit, NVIDIA
4. Supermicro Computer
5. HTML, Web Technology, DBMS,
6. Bioinformatics Tools and Software for & Drug Discovery (**Schrödinger**), Genomics, Proteomics DNA, Protein Modeling & Analysis
7. Biological Databases

Personal Skills & strength

Attitude	**:**	Positive
Aspiration	**:**	Excellent at carrying oneself

Work Strategy : Self Reliant, Strong at will, Good team player, Team Leading Capability
Communication Skills : Strong Interpersonal and Communication skills in English and Hindi

M.S. PROJECT - DISSERTATION

COMPUTER AIDED DRUG DESIGNING
IN SILICO BASED VIRTUAL SCREENING FOR THE IDENTIFICATION OF HIGH AFFINITY COMPOUNDS AS POTENT INHIBITOR FOR VEGFR2 FOR THE TREATMENT OF MEDULLARY THYROID CARCINOMA.

INTERNATIONAL PUBLICATION

- Yadav, M., Dhagat, S. and Eswari, J.S., 2020. Emerging strategies on in silico drug development against COVID-19: challenges and opportunities. *European Journal of Pharmaceutical Sciences*, p.105522.

- Yadav, M., Dhagat, S. and Eswari, J.S., 2020. Structure Based Drug Design and Molecular Docking Studies of Anticancer Molecules Paclitaxel, Etoposide and Topotecan using Novel Ligands. *Current drug discovery technologies*, *17*(2), pp.183-190.

- Eswari, J.S. and Yadav, M., 2019. New perspective of drug discovery from herbal medicinal plants: Andrographis paniculata and Bacopa monnieri (terpenoids) and novel target identification against Staphylococcus aureus. *South African Journal of Botany*, *124*, pp.188-198.

- Yadav, M. and Jujjavarapu, S.E., 2021. Neural Network Methodology for the Identification and Classification of Lipopeptides Based on SMILES Annotation. *Computers*, *10*(6), p.74.

- Yadav, M. and Eswari, J.S., 2022. Evolution of modern age drug discovery of lipopeptides and computer-aided drug discovery in India. *Indian Journal of Biochemistry and Biophysics (IJBB)*, *59*(5), pp.503-508.

- Yadav, M. and Eswari, J.S., 2022. Modern paradigm towards potential target identification for antiviral (SARS-ncov-2) and anticancer lipopeptides: a pharmacophore-based approach. *Avicenna Journal of Medical Biotechnology*, *14*(1), p.70.

- Yadav, M., Dhagat, S. and Eswari, J.S., 2020. Structure based drug design and molecular docking studies of anticancer molecules paclitaxel, etoposide and topotecan using novel ligands. *Current Drug Discovery Technologies*, *17*(2), pp.183-190.

- Toppo, A.L., Yadav, M., Dhagat, S., Ayothiraman, S. and Jujjavarapu, S.E., 2021. Molecular docking and ADMET analysis of synthetic statins for HMG-CoA reductase inhibition activity. *Indian Journal of Biochemistry and Biophysics (IJBB)*, *58*(2), pp.127-134.

- Yadav, M. and Eswari, J.S., 2023. LppDB-A Comprehensive Database for Lipopeptide based Drugs: Exploring Potential Drug Discovery Aspects. *Current Pharmaceutical Biotechnology*.

- A Virtual Screening Approach for the Identification of High Affinity Small Molecules Targeting BCR-ABL1 Inhibitors for the Treatment of Chronic Myeloid Leukemia.
  https://www.ncbi.nlm.nih.gov/pubmed/28828991
  Current Topics in Medicinal Chemistry (Bentham Science Publishers)

- **Book Publication**
  Computer-Aided Design of Antimicrobial Lipopeptides as Prospective Drug Candidates
  JS Eswari, S Dhagat, M Yadav
  CRC Press. (Taylor & Francis group), Sept. 2019

International Workshop

- Schrodinger & IIT-Indore workshop - Cloud-based Hands-on Workshop: Computational SBDD and Molecular Dynamics
- Modern Tools & Techniques in Drug Design, discovery & delivery (IIT Indore)
- Principles of Drug Discovery, Design & Development: Modern Concepts and Applications (GIAN Course by Prof. Apurba Dutta, University of Kansas) IIT Indore.
- GPU Computing in Computational Biology. By Dr. Seigfried Hoffinger, Austria at IIT Indore
- e-Workshop on "Docking, QSAR and Molecular Dynamics (Ramaiah Institute of Technology Bengaluru)

BIOINFORMATICS & BIOTECHNOLOGY SKILLS

Summary of Skills:

Strong background in Antimicrobial and Anticancer drug discovery, Antibiotic resistance, Cancer genomics and proteomics.
Scripting Lamguages
Mac and Linux OS
Basic knowledge of C and C++
Excellent analytical, mathematical, and statistical skills
Team oriented with ability to handle multiple projects simultaneously

1. **BIOINFORMATICS**
   - Bioinformatics software learned –
     - **SCHRÖDINGER- Maestro (Glide, Prime, Qikprop, Virtual Screening), Desmond**
     - **AUTODOCK VINA**
     - **PYREX**
     - **DISCOVERY STUDIO**
     - **AMBER for Molecular Dynamics Simulation)**
     - **CHIMERA**
     - **PYMOL**
     - **PYREX**
     - **SwissADME**
     - **admetSAR**
     - **BIOEDIT** - Analysis of Gene & Protein Sequence
     - **EMBOSS WIN** (Command line-based window for gene & protein sequence analysis)
     - **ORF FINDER**
     - **BLAST** (ONLINE & OFFLINE) - Homology searching tool (Basic Local Alignment Search Tool is an algorithm for comparing primary biological sequence information)

- **RASMOL** - Molecular graphics visualization Tool
- **SPDBV** (SWISS PDB VIEWER) - Protein 3D structure visualization program
- **PROTPARAM** - Protein Primary structure prediction (online)
- **SOPMA** - Secondary structure prediction method (online)
- Ramchandran Plot - universal plot for the validation of predicted protein model
- **PROTEIN MODELING SOFTWARES-**
    - **A. SPDBV**
    - **B. PRIME (SHRöDINGER)**
    - **C. ICM MOLSOFT (PAID)**
    - **D. PHYRE2**
    - **E. PS2 MODELING SERVER**
    - **F. ESYPRED 3D**
    - **G. 3D JIGSAW**
    - **H. CPH SERVER**
    - **I. PROCHEK (TO VALIDATE THE BEST MODEL OF PROTREIN)**
- **DRUG DESIGNING -**
    - **A. ARGUS LAB**
    - **B. MARWIN SKETCH**
    - **C. PUBCHEM DATABASE**
- **VIRTUAL SCREENING**
- **MOLECULAR DOCKING**
    - a. **MOLEGROW VIRTUAL DOCKER**
- **PHARMACOPHORE ANALYSIS**
- **QSAR STUDY**

2. MICROBIOLOGY

- Basic microbiological techniques
- Media preparation for microorganisms
- Isolation & culturing of microbes from sample
- Biochemical test for screening of microbes
- Staining techniques (Endospore, Capsular, Metachromatic Granules Staining, Fungal Staining, Acid Fast Staining, Gram's Staining)
- Serial dilution method for Bacterial culture
- Pouring, plugging, slant preparation & streaking on plates
- Sub culturing of microbes
- Isolation & culturing of microbes from soil sample (through serial dilution method)
- Isolation & culturing of microbes from water sample (through serial dilution method)
- Isolation & culturing of microbes from air (through exposure method)
- Determination of cell size of microorganisms
- Growth kinetics of microbes

3. BIOCHEMISTRY

- Estimation of DNA, RNA, PROTEIN & CARBOHYDRATE

4. MOLECULAR BIOLOGY & GENETIC ENGINEERING

- Isolation of Genomic DNA
- Plasmid DNA isolation and DNA quantitation: Plasmid minipreps
  Restriction digestion.
- Preparation of competent cells.
- Agarose gel Electrophoresis.
- Restriction Enzyme digestion of DNA
- Purification of DNA from an agarose gel
- Transformation of E.Coli with standard plasmids
- PCR (POLYMERASE CHAIN REACTION)

5. **PLANT TISSUE CULTURING**

6. **ENZYME TECHNOLOGY**
   - Enzyme kinetics
   - Immobilization of enzymes

7. **BIOPROCESS TECHNOLOGY**

8. **IMMUNOLOGY & ANALYTICAL TECHNIQUES**
   - Radio Immuno Assay
   - Ouchterlony double diffusion method
   - Antibody titre through ELISA method
   - Blood smear identification
   - Immunodiagnostics using commercial kits

9. **KNOWLEDGE ABOUT GENERAL WET LAB INSTRUMENTS**
   - Laminar airflow
   - Autoclave
   - Incubator
   - Centrifuge and cooling centrifuge
   - pH meter
   - Hot air oven
   - Spectrophotometer
   - Basics of HPLC
   - Various Analytical techniques

10. **WET LAB KNOWLEDGE**
    - DNA extraction and purification.
    - Various chromatographic techniques.
    - Salt analysis.
    - Protein and Carbohydrate estimation.
    - Titration

ACHIEVEMENTS & AWARDS

1. Winner of various Performance awards during my tenure in Genpact
2. Winner of Lean Premier League Presentation, Lean Quiz and Crosswords round. (Lean & 6 Sigma Quality Tools representation.
3. Best Student Award in School 2003, 2004 & 2005
4. District Topper in High School, 2003
5. Performed in several State Level Quiz contests
6. Participated in National Level Sanskrit Speech
7. Secured first position in College in M.Sc.

Languages Known	**:**	**Speaking**	**Reading**	**Writing**
English		Excellent	Excellent	Excellent
Hindi		Excellent	Excellent	Excellent

DECLARATION

I vouch for the authenticity of the above-mentioned facts.

Date: 22-10-2021 MANISHA YADAV