

ROMA SHARMA, Ph.D.

romasharma09@gmail.com | +91-9601915211

[LinkedIn](#) | [Web of Science](#) | [Research Gate](#)

Puducherry, INDIA

PROFILE SUMMARY

Three years of experience in Drug Discovery (executing *in silico* experiments through myriad computational methods), Drug Design, Structural Biology, and Molecular Dynamics simulations. Experience in running Python codes. Additionally, I have experience in writing scientific papers.

SKILLS

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|----------------------|--------------|----------------|
| ▪ Molecular Dynamics | ▪ ChemSketch | ▪ Docking |
| ▪ Scientific Writing | ▪ Gromacs | ▪ Presentation |
| ▪ Research Design | ▪ Next | ▪ Mentorship |
| ▪ Project Management | Generation | ▪ Leadership |
| ▪ Python | Sequencing | ▪ Peer Review |
| ▪ Cygwin | ▪ Discovery | ▪ Open Babel |
| | Studio | |

EDUCATION

- **Ph.D. in Chemistry, 2021-2024**
- **Master of Science in Forensic Science, Bundelkhand University, India. 2010-2012**
- **Bachelor of Science, International College for Girls, India. 2007-2010**

WORK EXPERIENCE

- **CACTUS COMMUNICATIONS, (Science Communicator on Contract)**
Selected for the role. Completed only the training phase.
- **RASA Life Science Informatics, Pune (2023-2024)**
Completed 6 months of training in Computer-Aided Drug Designing (CADD) and Molecular Dynamics and Simulation (MDS). Learned computational drug discovery and Insilico drug discovery techniques, which enabled the interpretation of biological data.
- **Project Trainee at BPRI, Noida (Nov 2023 – May 2024)**
Completed Project on Computational Analysis and Structure-Based Molecular Docking of SARS-CoV-2 Beta RBD in Complex with Human ACE2 and S304 Fab using NGS, CADD & Biopython.

- **Doctoral Researcher (2021-2024) Guide: Dr. Surabhi Singh**
 - Designed and executed a project to understand the drug repositioning mechanism and assess various pharmacokinetic properties.
 - Presented data at national and international conferences and published 2 peer-reviewed papers.
 - Collaborated on projects with BPRI Bio, Noida, and published papers in Scopus journals(Q2).
- **Reviewer at Science Publishing Group, New York, USA (2024- Present).**
- **Reviewer at Peer Review Central Journals. Reviewed papers and book chapters.**
- **9+ years of Teaching experience.**

PUBLICATIONS

- **SHARMA, R., & SINGH, S. (2023). A comprehensive study of recent breakthroughs in the management of dynamic viral infections.** *International Journal of Current Pharmaceutical Research*, 15(6), 23–30. <https://doi.org/10.22159/ijcpr.2023v15i6.3099>
- **Sharma R., & Singh S. (2024). A Comprehensive Analysis of Neopterin as a Prognostic Marker for SARS-CoV-2 Patients"**, *International Journal of Emerging Technologies and Innovative Research* (www.jetir.org), ISSN:2349-5162, Vol.11, Issue 2, page no. a224-a233, February-2024, <http://doi.one/10.1729/Journal.37782>
- **Uma Kumari, Roma Sharma *et al.* Next Generation Sequencing and Drug Repositioning Approach For Motor Neuron Disease, International Neurology Journal, Vol. 28 No. 1 (2024), 2024-04-25, <http://einj.net/index.php/INJ/article/view/478>**
- **Uma Kumari, Roma Sharma *et al.* Computational analysis and NGS pipeline for Human GRK2 in complex with G-beta-gamma in cardiovascular disease with Biopython, African Journal of Biological Sciences, Volume 6, Issue 9, 2024. <https://www.afjbs.com/uploads/paper/c89ed9106fdfce627fed92f0013cb41.pdf>**
- **Roma Sharma, Uma Kumari, 2024. Exploring the binding affinity landscape of SARS-CoV-2 variants: a computational approach, V 13 - I 3, Pages- 6566 – 6569, Doi: <https://doi.org/10.55522/jmpas.V13I3.6555>**

ACADEMIC PROJECTS/TRAINING

- **Certificate Course** in Scientific Writing in Health Research [NIeCer 103] from Indian Council for Medical Research (ICMR) - NIE
- **Completed Research Project with BDG Lifesciences, NEW DELHI** entitled Molecular Modeling Study of derivatives of Ethyl 2-[(4-chlorophenyl) carbamoylamino]-5-methyl-4-phenyl thiophene-3-

carboxylate phenyl thiophene-3-carboxylate and α -D-glucose-1-phosphate thymidyltransferase (Mycobacterium-RmlA) | Discovery of new drugs for multidrug-resistant (MDR)Mtb"

- **The Omics Logic Infectious Diseases Bioinformatics** Research - Applied Genomics program. Completed in June 2023 with OMICSLOGIC and Pine Biotech

During the program, I was able to develop the required skillset to analyse genomic data and gain more insight into the emergence of infectious diseases. Through applying the latest research techniques, I developed an in-depth knowledge of viral diversity and its connection to epidemics, zoonotic spillover, and human transmission.

- **Cheminformatics for Biomedical Drug Discovery**- Fall Program. Completed in November 2022 with OMICSLOGIC and Pine Biotech

This program is designed to address the challenges associated with understanding, modelling, screening, and applying Cheminformatics strategies to improve drug discovery results. Finding a new drug against a target for a particular disease usually involves high-throughput screening (HTS), wherein large libraries of chemicals are tested for their ability to modify the target. With contributions from leading researchers in academia, Biotechnology, and the pharmaceutical industry.

Awards and Honors:

- I. Awarded the **Young Researcher Award** at the ICERIPLST-2024 Conference.
- II. Secured second place in the Paper Presentation competition at the National Conference organized by **the Department of Biosciences, SMVEC, Puducherry**, showcasing exceptional expertise in the field and effective communication skills.
- III. Received the **Young Talent Award** for outstanding achievement at the Career Point School of Pharmacy Conference (Kota, Rajasthan).

Scopus profile link:

<https://www.scopus.com/sourceid/21101106407>

Web of Science Id:

<https://www.webofscience.com/wos/author/record/JVN-9984-2024>

ORCID:

<https://orcid.org/0009-0007-6154-1598>

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