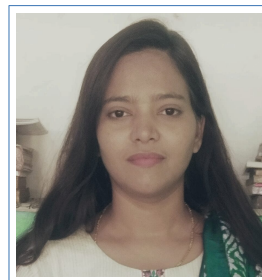


Vibha Mishra

Curriculum Vitae

Assistant Professor (Guest)
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Education

- 2018–2024 **PhD (Bioinformatics)**, Banaras Hindu University, Varanasi-221005, U.P., India.
Thesis title: *Exploring the Roles of Phytocompounds as Antiviral, Anti-Inflammatory, and Anti-Cancer Agents: A Multi-Target, Multi-Drug Approach Against SARS-CoV-2 and Drug-Resistant Breast Cancer*
- Supervisor : **Dr. Rajeev Mishra (Associate Professor), Bioinformatics (MMV)**, Banaras Hindu University, Varanasi, U.P., India.
- 2014–2016 : **Master of Science (Bioinformatics)**, Banaras Hindu University, Varanasi, U.P., India.
- 2010–2013 : **Bachelor of Science (Biotechnology, Zoology)**, Mahatma Gandhi Kashi Vidyapeeth, Varanasi, U.P., India.
- 2010 : **Higher Secondary Examination**, L. S. Inter college, Varanasi, U. P., (U.P. board).
- 2008 : **Secondary Examination**, A. M. Inter college, Varanasi, U. P., (U.P. board).

Fellowships & Awards

- 2017 **Qualified CSIR-UGC NET** in Life Sciences
- 2021–2022 **UGC RET Fellowship** in Ph.D.
- 2022–2023 **Sayaji Rao Gayakwad Fellowship** in Ph.D.

Research Interests

- Structural Bioinformatics, Computational Drug Discovery
- Gene Expression Analysis

Teaching & Research Experience

- Guest Faculty in Department of Integrative Science at Maharaja Suhel Dev University, Azamgarh – November 2024 - May 2025
- Supervised M.Sc. student dissertation at Maharaja Suhel Dev University: “Exploring Crucial Targets in Alzheimer’s Disease using Protein-Protein Interaction Network and Enrichment Analysis”.
- Involved in teaching Computer-aided Drug Discovery and Immuno-informatics to M.Sc. students in Bioinformatics during Ph.D. at Banaras Hindu University.
- Training in drug discovery technology at AIIMS, New Delhi.
- Conducted Hands-on training on Linux commands; Biological Sequence Analysis using BLAST, CLUSTAL and MEGA software tools at MMV, BHU.
- Employed data-centric methodologies, such as transcriptomic analysis and molecular dynamics simulations, to uncover novel biomarkers and therapeutic candidates during doctoral research.

Technical skills

Skilled in Data handling, analysis and visualization, High Performance Computing, Linux workstation
Languages R Programming (Gene expression analysis and visualization), Bash script (Molecular Docking automation)
Softwares AutoDock Vina, GROMACS, gmx_mmpbsa, DESeq2
OS Linux, Windows, Mac

Publications

- 2025 **Vibha Mishra**, Shivangi Agrawal, Divya Malik, Divya Mishra, Bhavya, Ekta Pathak and Rajeev Mishra, Targeting Matrix Metalloproteinase-1, Matrix Metalloproteinase-7 and Serine Protease Inhibitor E1: Implications in Preserving Lung Vascular Endothelial Integrity and Immune Modulation in COVID-19 , (doi: 10.1016/j.ijbiomac.2025.141602), **Impact Factor : 8.5** .
- 2023 **Vibha Mishra**, Divya Malik, Shivangi Agrawal, Bhavya, Ekta Pathak and Rajeev Mishra, Targeting SARS-CoV-2 Main Protease Variants: Investigating the Role of the P132H Mutation in Ligand Binding and the Potential of Withania somnifera Phytochemicals , ChemRxiv 2024; doi: 10.26434/chemrxiv-2024-hhfl4 .
- 2022 Shivangi Agrawal, Ekta Pathak, Rajeev Mishra, **Vibha Mishra**, Afifa Parveen et. al, Computational exploration of the dual role of the phytochemical fortunellin: antiviral activities against SARS-CoV-2 and immunomodulatory abilities against the host. Computers in Biology and Medicine 149, 106049, **Impact Factor : 6.3**

Poster Presentations

- Poster Presentation on Hierarchical virtual screening of natural compounds to identify potential inhibitors of EGFR1 International Translational Cancer Research (TCR) Conference organized by Department of Biochemistry, BHU, held on 13-16 Feb., 2020.
- Poster Presentation on Exploring the multi-targeting potentials of naringenin-7- O-glucoside (N7G) against SARS-CoV-2, International Conference on Exploring new horizons in Biotechnology (ENB-2023) and RABI-2023 organized by school of Biotechnology and IoE, BHU, held on 10-12 Feb., 2023.

Workshops & Conferences

- 2024 **Participated in** *2nd International Symposium on Trends in Computational and Systems Biology on 20 January 2024 organized by Bioinformatics, MMV, BHU.*
- 2023 **Participated in** *1st International Symposium on Trends in Computational and Systems Biology on 28 April 2023 organized by Bioinformatics, MMV, BHU.*
- 2023 **Participated in** *National Workshop on Tools and Techniques for Scientific Research on February 27th, 2023 organized by Computer Science, MMV, BHU.*
- 2022 **Participated in** *Five days Faculty Development Programme (FDP) cum Student Training Program (STP) on Artificial Intelligence and Machine Learning organised on 3rd to 8th August, 2022, Atal Incubation Center, BHU.*
- 2019 **Participated in (14-15 September):**Two days workshop on Mathematics for Biologists Using Computational Tools organized by Bioinformatics, Mahila Mahavidyalaya, BHU.
- 2019 **Participated in** Symposium on Research Ethics and Scientific Publishing Department of Molecular & Human Genetics and Faculty of Ayurveda, BHU, held on 27 March, 2019.