

# Amrit Chattopadhyaya

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<b>Education</b>	<b>University of Hyderabad</b>	<b>Telangana, India</b>
	Master's student (2021-2023). Department of Plant Sciences and Microbiology. Specialized in Molecular Microbiology.	(CGPA 8.54)
	<b>Banaras Hindu University</b>	<b>Uttar Pradesh, India</b>
	Master's student (2018-2020). Department of Forensic Science. Institute of Science, Banaras Hindu University.	(CGPA 8.28)
	<b>University of Burdwan</b>	<b>West Bengal, India</b>
	Bachelor's student (2015-2018). St. Xavier's College, Burdwan, West Bengal. Biotechnology (Honors). Secured 5 <sup>th</sup> rank in university.	(73.15%)
	<b>Kendriya Vidyalaya No.2 Ambala Cantt.</b>	<b>Haryana, India</b>
	Class 12 <sup>th</sup> (2015)- CBSE Board Science with Biology (PCB).	(81%)
	Class 10 <sup>th</sup> (2013)- CBSE Board.	(CGPA-9.0)
<b>Experiences</b>	<b>Banaras Hindu University</b>	<b>Uttar Pradesh, India</b>
	Proteomics Laboratory, Centre of Experimental Medicine and Surgery. Research assistant, IOE seed grant fellow. (01-May-2024- 15- December-2024)	
	<b>Advisor: - Dr. Vibhav Gautam</b>	
	<b>Project Title: "Elucidating the Therapeutic potential of nanomaterials using in vitro and in vivo approaches."</b>	

**University Of Hyderabad**

**Telangana, India**

Department of Plant Sciences and Microbiology. M.Sc. Project Student  
(August 2022- April 2023)

**Advisor: - Dr. Kodetham Gopinath**

**Thesis Title: “Transient expression of *Papaya ringspot virus* (PRSV-Hyd) strain P1 and Hc-Pro genes *in planta* and their synergistic effect during *Cucurbit carmovirus* infection.”**

Responsibilities include preparation of P1 and Hc-Pro genes clone construction and transfection using the agrotransfection method. Also acquired extensive training in molecular biology techniques including ELISA, Western Blotting, Confocal Microscopy, Gel electrophoresis, and DNA/RNA isolation using plant viruses as a working model.

Learned Mass spectrometry, HPLC, Gas chromatography, and proteomics techniques in collaboration with RTGR, University of Hyderabad

**Banaras Hindu University**

**Uttar Pradesh, India**

Department of Forensic Medicine and Toxicology, IMS-BHU. M.Sc. Project Student.  
(Oct 2019-April 2020)

**Advisor: - Dr. S.K. Pandey**

**Thesis Title: “*Analysis of Pattern of Fatal head injuries with different types of Trauma in the people of Varanasi*”.**

Responsibilities included learning and observing postmortem of all the medico-legal cases like murder, suicide, burning, accidental, sudden death, rape, etc. under the supervision of the advisor. Collection of viscera samples, and preparation of chain of custody and other documentation based on postmortem investigation. Also, collected data and observations on various head injuries.

Also got selected for training in the Forensic Exhumation Workshop organized by **AIIMS Jodhpur-2019**.

**Skills**                      **Technical-** MS Office, MS PowerPoint, GraphPad Prism

**Molecular Biology Skills** - Preparation of gene constructs, Cloning, PCR, Gel electrophoresis, Total nucleic acid isolation, ELISA, Western Blotting, Confocal microscopy, UV-visible spectroscopy, Competent cell preparation, Agrobacterium transfection. *In vitro* Cytotoxicity assessment, maintenance and handling of Cell lines (MCF-7 and MDA-MB-231)

**Forensic Science Skills-** Crime scene investigation, Postmortem analysis (live demonstration), Viscera Collection, analytical techniques like- NMR spectroscopy, Titrations. Microscopy- Stereomicroscopy, Comparison Microscope.

**Microbiology Skills-** Plasmid isolation, Serial dilution, media preparation, staining, ability to handle culture and subcultures, fungal endophytes culture.

**Languages**              **English-**Complete fluency in speaking, writing, & reading.

**Hindi-**Complete fluency in speaking, writing, & reading

**Bengali-** Native/bilingual proficiency in speaking and reading.

**Achievements**    1. Qualified 25<sup>th</sup> West Bengal State Eligibility Test (WBSET-2024)

2. Qualified GATE-Biotechnology 2024

3. Qualified UOH-PG 2021- AIR 19

4. Qualified BHU-PET-2018- AIR 90

## **Publications**

1. Tiwari H, Singh S, Sharma S, Gupta P, Verma A, **Chattopadhyaya A**, Kumar B, Agarwal S, Kumar R, Gupta SK, **Gautam V\***. Deciphering the Landscape of Triple Negative Breast Cancer from Microenvironment Dynamics and Molecular Insights to Biomarker Analysis and Therapeutic Modalities. *Medicinal Research Reviews* (2024). <https://doi.org/10.1002/med.22090>; **Impact factor- 10.9**.
2. Gupta P, **Chattopadhyaya A**, **Gautam V\***. Myco-nanotechnological approach to synthesize gold nanoparticles using a fungal endophyte, *Penicillium oxalicum* and unravelling their antibacterial activity and anti-breast cancer role via metabolic reprogramming. *Biomedical Materials* (2024). <https://doi.org/10.1088/1748-605X/ad7e6a>, **Impact factor- 3.9**

3. Singh S, Tiwari H, Verma A, Gupta P, **Chattopadhyaya A**, Singh A, Singh S, Kumar B, Mandal A, Kumar A, Yadav AK, Gautam HK, **Gautam V**. Sustainable Synthesis of Novel Green-Based Nanoparticles for Therapeutic Interventions and Environmental Remediation. *ACS Synthetic Biology* (2024). <https://doi.org/10.1021/acssynbio.4c00206>, **Impact factor- 3.7**
4. **Book Chapter-** Bhaskar, P., Tripathi, R., Singh, S., Chattopadhyaya, A., Verma, A., & Gautam, V. (2024). Navigating the Nanoscale Frontier: An In-Depth Introduction to the World of Nanomedicine. In *Nanomedicine* (pp. 531-559). Springer, Cham.
5. Chattopadhyaya A, Kural S, Verma A, Gupta P, Tiwari H, Singh S, Thakur A, Kumar R, Sankhwar SN, Singh SK, Agarwal S. Urinary miRNAs in bladder cancer. *Clinica Chimica Acta*. 2024 Dec 25;120113. **Impact factor- 3.2**

**Referees: -**

- 1. Dr. Vibhav Gautam, PhD**  
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Institute of Medical Sciences  
Banaras Hindu University (IMS-BHU).  
Varanasi, Uttar Pradesh  
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- 2. Dr. Lalit Kumar, MBBS, M.S, M.C.h**  
Assistant Professor  
Department of Urology  
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- 3. Dr. Kodetham Gopinath, PhD**  
Associate Professor  
Department of Plant Science, School of Life Science  
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Hyderabad, Telangana.  
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- 4. Dr. Surendra Kumar Pandey, MBBS , MD**  
Associate Professor  
Department of Forensic Medicine & Toxicology  
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