

KRITI GUPTA

C-1/1003/Akash Enclave, Lucknow, India
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Education

Master of Science: Biochemistry <i>Maharaja Sayajirao University of Baroda GPA:7.67</i>	Oct. 2021-May 2023 <i>Vadodara</i>
Bachelor of Science: Biochemistry(H) <i>Sri Venkateswara College, University of Delhi CGPA:8.82</i>	July 2018-May 2021 <i>New Delhi</i>
Secondary School Examination <i>City Montessori School 95.25%</i>	April 2016-May 2017 <i>Lucknow</i>
Higher Secondary Examination <i>City Montessori School 95%</i>	April 2014-May 2015 <i>Lucknow</i>

Research Experience

Thesis: Study of Bioenergetics of Liver In Polycystic Ovarian Syndrome Rat Model <i>Dissertation under under Dr Laxmipriya Nampoothiri</i>	July'22-May'23 <i>Vadodara</i>
- Developed PCOS rat model by letrozole administration using oral tube feed method, performed orbital sinus method of blood collection, dissection and extraction of organs. - Conducted Oral Glucose Tolerance Test to compare the processing level of Glucose in PCOS and normal rats. - Examined the activity of mitochondrial Electron Transport Chain complexes to assess the alteration in ATP generation in PCOS. - Analyzed the alteration in gene expression related to mitochondrial biogenesis in the liver. - Performed Western Blot to check the difference in steroid receptors expression in PCOS v normal rats.	

Professional Development Training

PhD Scholar at Banaras Hindu University <i>Under Dr Ajay Kumar</i>	July 2025-Present <i>Varanasi</i>
JRF at Banaras Hindu University <i>Intern under Dr Ajay Kumar</i>	Sept 2024-June 2025 <i>Varanasi</i>
* Understanding the role of find me and do not eat me signals in the development and progression of T cell lymphoma	
Volunteer at AIIMS, New Delhi <i>Intern under Dr Archana Singh</i>	Aug 2023-May 2024 <i>New Delhi</i>
* Learnt basics of techniques like Transmission Electron Microscopy, Liquid Chromatography- Mass Spectroscopy, Seahorse XF technology, Real time PCR.	
Workshop at International center for Stem cell, Cancer and Biotechnology <i>Intern under Dr Sheo Mohan Singh</i>	July 2023 – July 2023 <i>New Delhi</i>
- Worked with Jurkat and 293T cell lines, learnt animal culture techniques such as seeding, passaging, cryopreservation, Media formulation and MTT assay. - Conducted molecular biology techniques such as PCR , DNA and plasmid isolation, RNA extraction from cells. - Performed restriction enzyme digestion, ligation , transformation and prepared competent cells. - Extracted proteins from cell lines, performed SDS-PAGE and Western Blotting.	
Proteomics Advanced Winter School(Online) <i>Prof Sanjeeva Srivastava</i>	Nov 2021 <i>IIT Bombay</i>
* Acquired in depth knowledge about X-ray Crystallography and Nuclear Magnetic Resonance during the proteomics advanced Winter school organized by IIT Bombay.	
SRI VIPRA(Online) <i>Intern under Dr Vandana Malhotra</i>	June 2020-Aug 2020 <i>New Delhi</i>

- * Learnt various techniques like PCR, Cloning, Agarose Gel Electrophoresis, Transformation, and Colony PCR.
- * Analysed Mycobacterium tuberculosis signal transduction system, protein-protein interaction using various bioinformatics tools such as TubercuList, STRING.
- * Designed full-length primers for amplification of the pknD gene and analyzed using the Oligoanalyzer tool.

Exploring the Science of gene editing(Online)

May 2020-June 2020

Intern under **Dr Kriti Kaushik, AIIMS,**

New Delhi

- * Explored different gene editing tools i.e CRISPR-Cas9 , TALENs , Zinc Finger Nucleases.
- * Trained in various bioinformatics tools like Ensembl, BLAT, BLAST, ClustalW, etc.

Technical Skills

Animal Handling: Well equipped with the handling of rats, dissection, performing orbital sinus for blood collection from eyes, intraperitoneal and intramuscular mode of injection, oral tube feeding

Molecular Biology: Primer designing, Polymerase Chain Reaction, RNA isolation, Genomic DNA isolation, Agarose Gel Electrophoresis, Plasmid isolation, Preparation of Competent cells

Protein Chemistry: SDS PAGE, Western blotting, Affinity chromatography, Gel Electrophoresis

Biophysical Techniques: UV/Vis Spectrophotometer, Ultracentrifugation, Nanodrop

General Microbiology: Preparation of culture media, Bacterial growth kinetics, Streaking and spreading

Immunological Techniques: ELISA

Bioinformatics Skills: SnapGene, BLAST, Jmol, Clustal omega, DNA sequence analysis, Protein Sequence Analysis, Protein Structure visualization, Gene cloning

Cell Culture: Seeding, passaging, thawing, cryopreservation, Cell line expansion and maintenance, Media formulation, Contamination identification and prevention, MTT Assay

Visualising Softwares: ImageJ and prism

Leadership/ Extracurricular

Published review paper titled **Role of Lysophosphatidic acid in the regulation of immune cells and hematological malignancies** in the journal **Prostaglandins and other lipid mediators**. DOI: 10.1016/j.prostaglandins.2025.107028

Qualified Joint CSIR-UGC NET DECEMBER 2025, JRF with AIR 100

QUALIFIED CSIR-NET 2023, 2024; NET-LS

QUALIFIED GATE 2024 with rank of 660

TREASURER: Of CATALYSIS, the Biochemical Society of Sri Venkateswara College. Managed team of 4 members and ran monthly meetings to oversee the resources.

ORGANIZER: Member of the organizing committee for MINDSPAR and VISTAAR organized by Sri Venkateswara College, Delhi University

CERTIFICATE COURSES: Completed 6 month certificate course in Ayurbiology and Intellectual Properties Rights, organized by Sri Venkateswara College, Delhi University