

SHWETA SHARMA

**Ph.D. Biotechnology, School of Biotechnology, Jawaharlal Nehru University (JNU),
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Career Objectives:

To leave an everlasting impression in the field of biotechnology, by implementing expertise in designing and executing the innovative projects, for the better, faster and accurate techniques in the advanced biotechnological studies; thereby increasing the reputation of our esteemed organization. Meanwhile, learn, acquire and adapt new information that yield a worthy knowledge.

Academic Qualifications:

Qualification	Board/University	School/College	Specialization	Year of Passing	Percentage (%)
Ph.D. (Biotechnology)	Jawaharlal Nehru University, New Delhi	Jawaharlal Nehru University, New Delhi	Biotechnology	Submitted	
M.Sc. (Biotechnology)	Pt. Ravishankar Shukla University, Raipur	S.o.S Biotechnology, Pt.R.S.S. University Raipur (C.G)	Biotechnology	2014	76.04%
B.Sc. (Biotechnology)	Pt. Ravishankar Shukla University, Raipur	Govt. Nagarjuna P.G. College of Science, Raipur (C.G)	Biotechnology	2012	76.66%
HSSC (12th)	CGBSE, Raipur	Holy Cross PensionBada School, Raipur (C.G)	Biology	2009	86.8%
SSC (10th)	CGBSE, Raipur	Holy Cross Pension Bada School, Raipur (C.G)	Biology	2007	83.5%

Research Experience:

S. No.	Particulars	Project & Place
1	Junior Research Fellow (2018-2021)	Project entitled “Genotype-phenotype relationship in rare genetic disorders: Physiochemical analysis of mutations in GNE myopathy and phenotypic modulation by small molecule effectors” under the supervision of Dr. Ranjana Arya, JNU, New Delhi
2	Masters Research Trainee	Six months training in molecular biology techniques, expression and protein purification at CSIR- Central Drug Research Institute Lucknow under the supervision of Dr. Ashish Arora (Sr. Scientist Molecular & Structural Biology Division)

Major Achievements:

- Gold medalist in B.Sc. (Biotechnology) at Pt. Ravishankar Shukla University, Raipur
- UGC PG Merit Scholarship Rank Holder.
- Qualified All India JNU entrance examination for Ph.D. in the year 2015.
- Qualified JNU Combined Entrance Examination for biotechnology programme - M.sc (Agri) (AIR-113).
- **Patent filed: “A skeletal muscle cell-based model system for GNE Myopathy”** Patent application No. 202011019014.

Technical Expertise:

- **Molecular biology/cell biology techniques** (site directed mutagenesis, DNA and protein electrophoresis, Native-PAGE, semiquantitative PCR, RT-PCR, immunoblotting, immunoprecipitation, immunofluorescence)
- **Cell culture-based techniques** (microbial and mammalian cell culture techniques, *in-vitro* transfection protocols, stable cell line generation)
- **Flow cytometry**
- **Biochemistry** (Enzymatic assays)
- **Analytical Methods** (Affinity chromatography, Size exclusion chromatography)
- **Cloning and Genetic engineering techniques**
- **Confocal microscopy and Fluorescence microscopy**

Important Publications:

- **Sharma, S.,** Bora, R.S., Saini, K.S. and Arya, R. 2020. Optimizing chaperone removal strategy from over-expressed recombinant proteins: GNE, a case study, Book chapter in 2nd Edition of the volume “Insoluble Proteins” of the “Methods in Molecular Biology” book series (2020).
- **Sharma, S.,** Chanana, P., Bharadwaj, R., Bhattacharya, S. and Arya, R. 2022. Functional characterization of GNE mutations prevalent in Asian subjects with GNE myopathy, an ultra-rare neuromuscular disorder. *Biochemie*. DOI:10.1016/j.biochi.2022.03.014.
- Chaudhary, P., **Sharma, S.,** Singh, S. and Arya, R. 2021. Elucidation of ER stress and UPR pathway in sialic acid deficient cells: pathological relevance to GNEM, *Journal of Cellular Biochemistry* (2021), DOI:10.1002/jcb.30148.
- Devi, S.S., Yadav, R., Mashangva, F., Chaudhary, P., **Sharma, S.** and Arya, R. 2021. Generation and Characterization of a skeletal muscle cell-based model carrying one single Gne allele: Implications in actin dynamics. *Molecular Neurobiology*, DOI:10.1007/s12035-021-02549-w.

Science Communication Platforms:

- Presented poster entitled “Biochemical characterization and relative enzymatic activity of wtGNE and mutants” in International Conference on “Trends in Biochemical and

Biomedical Research: Advances and Challenges” organized by Department of Biochemistry, Institute of Science, BHU, Varanasi.

- Awarded for The Best Poster award in National science day 2019 at JNU, New Delhi.
- Presented poster entitled “Functional characterization of GNE mutations to understand Genotype to phenotype correlation” in national conference on Biological Transactions: From Molecules to Organisms (BTMO-2019) organised by Dept. Of Microbiology and Cell Biology, Indian Institute of Science (IISc), Bangalore.
- Presented poster entitled “Altered calcium levels in sialic acid deficient cells: Pathological relevance to GNE Myopathy in XLIII All India Cell Biology Conference (AICBC-2019) at IISER Mohali, Chandigarh.
- Participated in the workshop on Intellectual property rights (IPR) organized by CWEI at JNU, New Delhi (2018).
- Participated in the science communication and career workshop organized by Nature India and the welcome trust/DBT India alliance, at JNU, New Delhi (2018).
- Participated in workshop on ‘Concepts of super resolution microscopy-STORM (Stochastic Optical Reconstruction Microscopy) and its applications’ at AIRF, JNU New Delhi.

Significant Qualities:

- Ability to work accurately and independently.
- Communication & Collaboration skills.
- Careful documentation of research plan, execution and data collection.
- Time management.

Contact Details of 3 Referees:

Reference 1:	Reference 2:	Reference 3:
Dr. Ranjana Arya Assistant Professor School of Biotechnology, Jawaharlal Nehru University, New Delhi, INDIA-110067 Ph: 011-26738754 Email: arya.ranjana24@gmail.com	Dr. Debasisa Mohanty Staff Scientist-VII National Institute of Immunology, New Delhi, INDIA-110067 Ph: 011-26717121-45, Email: deb@nii.ac.in	Dr. Pawan K. Dhar Professor School of Biotechnology, Jawaharlal Nehru University, New Delhi, INDIA-110067 Ph: 91-11-26742575 Email: pawandhar@mail.jnu.ac.in, pawan.dhar@outlook.com

DECLARATION

Hereby, I assure that the information furnished above is true to the best of my knowledge. If I get an opportunity to work in your concern, I assure that I shall discharge my duties to the fullest satisfaction of my employer and to the best of my ability.

Thanking you.

Place: New Delhi, INDIA

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