Curriculum Vitae

Deena Nath Gupta

Ph.D. Biochemistry
Department of Biosciences and Bioengineering
(*Formerly Department of Biotechnology*)
Indian Institute of Technology (IIT) Roorkee,
Roorkee, Uttarakhand, India-247667
Mobile: +918800219286; +917217456434
E-mail: dngupta21@gmail.com, dgupta@bt.iitr.ac.in

Technical Skills:

Cloning, expression, and purification of protein; Antioxidant enzyme assay; mutagenesis in protein; Drug discovery and bioinformatics; Protein crystallography; Cell line-based assay: MTT assay, Wound healing, cell proliferation, Isolation and estimation of protein & nucleic acid.

Instrument Handled:

Circular dichroism; Fluorescence spectrometer; Differential scanning calorimetry (DSC); Isothermal Titration Calorimetry (ITC); Surface Plasmon Resonance (SPR); Gel electrophoresis; UV Spectrophotometer; Plate reader; PCR; Gel doc etc.

Education:

- **Indian Institute of Technology Roorkee, Roorkee**, India. Awarded 06 April 2023.
  Ph.D. Department of Biosciences and Bioengineering
  Thesis title "Studies of antioxidant enzyme peroxiredoxins from *Candidatus* Liberibacter asiaticus and its host *Citrus* sinensis".

- **Jawaharlal Nehru University, New Delhi**, India. From Jan 2011 to Jun 2011.
  Research Intern. (M.Sc.), School of Life Sciences.
  Dissertation Title: "Modulatory potential of naringenin against gamma radiations induced cellular and molecular damage". (Under the guidance of Dr. Ashu Bhan Tiku)

- **Bundelkhand University, Jhansi**, India. From July 2009 to June 2011.
  Master of Science (M.Sc.), Biochemistry, Department of Biochemistry.
  Summer Intern: Uttar Pradesh Drugs and Pharmaceutical Limited, Lucknow, India.
  Dissertation Title: "Quality control and drugs formulation of bioactive compound" from 1 to 30 June 2010.

- **Deen Dayal Upadhyay Gorakhpur University, Gorakhpur**, India. From 2005 to 2008
  Bachelor of Science (B.Sc.), Chemistry, Zoology, and Botany.

Fellowship / Awards:

- Senior Research Fellowship, CSIR-UGC from June 2018 to July 2022, R.N.324470.
- Junior Research Fellowship, CSIR-UGC from July 2016 to June 2018, R.N.324470.
- CSIR NET LS Qualified June 2014 (**AIR 40**) R.N.325266.
- CSIR NET LS Qualified June 2013 (**AIR 27**) R.N.329283.
- GATE 2013 qualified with 92 percentiles.

Experience:

Assistant Professor
From 01 December 2022 to till date.
Department of Applied and Allied Science,
University of Patanjali, Patanjali Yogpeeth, Haridwar.

Role in Administrative work as Assistant Professor:

- Member of Admission Committee, Academic session 2022-2023, University of Patanjali, Haridwar.
- Member of the Discipline Committee 2023-2024, University of Patanjali, Haridwar.
- Member of the Board of Studies (BOS), Department of Allied and Applied Science University of Patanjali, Haridwar.
- Member of the Research & Development Committee, Department of Allied and Applied Science, University of Patanjali, Haridwar.
- Member of Extra and co-curricular activity, Department of Allied and Applied Science, University of Patanjali, Haridwar.
- Member of academia and industry interaction committee, University of Patanjali, Haridwar.

Research Publications:

1. **Deena Nath Gupta**, Ruchi Rani, Amol D. Kokane, Dilip Kumar Ghosh, Shailly Tomar, Ashwani Kumar Sharma (2022). Characterization of a cytoplasmic 2-Cys peroxiredoxin from Citrus sinensis and its potential role in protection from oxidative damage and wound healing. *International journal of biological macromolecules*, *209*(Pt A), 1088–1099. https://doi.org/10.1016/j.ijbiomac.2022.04.086

2. **Deena Nath Gupta**, Vikram Dalal, Brajesh Kumar Savita, Md Shahid Alam, Anamika Singh, Mrugendra Gubyad, Dilip Kumar Ghosh, Pravindra Kumar, and Ashwani Kumar Sharma (2022). Biochemical characterization and structure-based *in silico* screening of potent inhibitor molecules against the 1-cys peroxiredoxin of bacterioferritin comigratory protein family from *Candidatus Liberibacter asiaticus*. *Journal of biomolecular structure & dynamics*, 41(12), 5776–5788. https://doi.org/10.1080/07391102.2022.2096118

3. **Deena Nath Gupta**, Vikram Dalal, Brajesh Kumar Savita, Poonam Dhankhar, Dilip Kumar Ghosh, Pravindra Kumar & Ashwani Kumar Sharma (2021). In-silico screening and identification of potential inhibitors against 2Cys peroxiredoxin of *Candidatus* Liberibacter asiaticus. *Journal of biomolecular structure & dynamics*, 40(19), 8725–8739. https://doi.org/10.1080/07391102.2021.1916597

4. **Deena Nath Gupta**, Sapna Lonare, Ankur Singh, Ruchi Rani, Dilip Kumar Ghosh, Shailly Tomar, Ashwani Kumar Sharma (2023). Comparative binding analysis of inhibitors to peroxiredoxins from *Candidatus* Liberibacter asiaticus and its host *Citrus sinensis.* (Accepted in *Applied Biochemistry and Biotechnology*).

5. **Deena Nath Gupta**, Surabhi Rode, Harry Kaur, Sapna Lonare, Md. Shahid Alam, Partha Roy, Ashwani Kumar Sharma. Antioxidative potential analysis of peroxiredoxin and its mutant I51C from Candidatus Liberibacter asiaticus and their roles in ROS scavenger, cell proliferation, and wound healing. (Manuscript under preparation).

6. Harry Kaur, Surabhi Rode, Sandra KP, Jai Krishna Mahto, Md Shahid Alam, **Deena Nath Gupta**, Bibekananda Kar, Jitin Singla, Pravindra Kumar and Ashwani Kumar Sharma. (2023) Characterization of a novel self-cleaving haloacid dehalogenase superfamily acid phosphatase from *Staphylococcus lugdunensis* (*Submitted in Journal of Molecular Biology, JMB-D-23-00894*).

7. Sapna Lonare, Monica Sharma, Vikram Dalal, Mrugendra Gubyad, Pranav Kumar, **Deena Nath Gupta**, Akshay Pareek, Shailly Tomar, Dilip Kumar Ghosh, Pravindra Kumar, Ashwani Kumar Sharma (2023). Identification and evaluation of potential inhibitor molecules against TcyA from Candidatus Liberibacter asiaticus, *Journal of structural biology,107992.https://doi.org/10.1016/j.jsb.2023.107992*

8. Shipra Sharma, **Deena Nath Gupta**, Ankita Singh Kushwah, Ashwani Kumar Sharma, Ramasare Prasad (2023). Identification and characterization of the Cyamopsis tetragonoloba transcription factor MYC (CtMYC) under drought stress, *Gene*, *882*, 147654. https://doi.org/10.1016/j.gene.2023.147654

9. Brajesh Kumar Savita; Vikram Dalal; Shweta Choudhary; **Deena Nath Gupta**; Neeladrisingha Das; Shailly Tomar; Pravindra Kumar; Partha Roy and Ashwani Kumar Sharma (2021): Characterization of recombinant pumpkin 2S albumin and mutation studies to unravel potential DNA/RNA binding site. Biochemical and Biophysical Research Communications 580 (2021) 28e34**.** https://doi.org/10.1016/j.bbrc.2021.09.076

10. Gunjan Saini, Vikram Dalal, **Deena Nath Gupta**, Nidhi Sharma, Pravindra Kumar & Ashwani Kumar Sharma (2021): A molecular docking and dynamic approach to screen inhibitors against ZnuA1 of Candidatus Liberibacter asiaticus, Molecular Simulation, 47:6, 510-525, https://doi.org/10.1080/08927022.2021.1888948

11. Md Shahid Alam, Surabhi Rode, Harry Kaur, Sapna Lonare, and **Deena Nath Gupta** (2022). *Bionanotechnology Towards Sustainable Management of Environmental Pollution*, 29. DOI: 10.1201/9781003270959-2 (*Book Chapter*).

Conference & Symposium:

1. **Deena Nath Gupta**, Ruchi Rani, Shailly Tomar, and Ashwani Kumar Sharma. Characterization of Peroxiredoxin and its role in the antioxidants defense system. July 21-23, 2021. International virtual conference, The American Society for Biochemistry and Molecular Biology (ASBMB), USA. (*Oral presentation*).

2. **Deena Nath Gupta**, Ruchi Rani, Shailly Tomar, Ashwani Kumar Sharma. Biochemical and biophysical characterization of peroxiredoxin from Citrus sinensis and their biomedical applications. The 48th National Seminar on Crystallography, 25th – 27th November 2021, IIT Roorkee, Roorkee, India. (*Oral presentation*).

3. **Deena Nath Gupta**, Vikram Dalal, Pravindra Kumar, and Ashwani Kumar Sharma 2018. Purification and partial characterization of a peroxiredoxin from Candidatus Liberibacter asiaticus. 42nd Annual Meeting of the Indian Biophysical Society at IISER Pune, India. (*Poster presentation*)

4. **Deena Nath Gupta**, Vikram Dalal, Pravindra Kumar, and Ashwani Kumar Sharma 2018. Biophysical and Biochemical Study of 1 & 2 Cys Peroxiredoxin from Candidatus Liberibacter asiaticus (CLa). CCP4 at Institute of Microbial Technology (CSIR-IMTECH), Chandigarh, India. (*Poster presentation*).

5. Participated in **Global Initiative Academic Networks** (GIAN) course on "*Recent* Advancements *in Biophysical Techniques and Virology"* from April 15-21, 2018 organized by a joint venture of the Ministry of Human Resource and Development (MHRD) and IIT Roorkee with faculty Dr. Gabriel C. Lander (Scripps Research Institute, USA).

6. Participated in the **"Indo-Italian Elettra beamline User Meeting and workshop"** on November 11-12, 2019 held at the Department of Biophysics, All India Institute of Medical Sciences (AIIMS) New Delhi.

7. Attends the **Indo-UK Virtual Conference** *"Current Innovations and the Future of Therapeutic Developments"* organized by Centre for Biomaterials Cellular & Molecular Theranostics (CBCMT) at Vellore Institute of Technology (VIT), Vellore, India and Swansea University, United Kingdom during 1st-3rd June 2020.

8. Participated in the Shastri Indo-Canadian Institute sponsored **Indo-Canada online workshop** on *Nano-Bioengineering* jointly organized by the Department of Biotechnology, Indian Institute of Technology (IIT) Roorkee and Centre for Biomedical Research (CBR), University of Victoria (UVic) Canada held on 3/13/2021.

9. Attends '***The Protein Society 35th Annual Symposium***' held virtually from July 7 - 14, 2021 organized by The Protein Society, Canyon Country, CA 91386 USA.

Extra-Curricular Activities and Computer Skills:

- MS Excel, MS Word, PowerPoint, and basic bioinformatics software.
- National Service Scheme (N.S.S.) 2008 D.D.U. Gorakhpur University, India.
- Data analysis software Origin Pro and GraphPad Prism etc.

Personal Information:

Father: Mr. Raj Deo Gupta;
Mother: Mrs. Tara Devi;
Marital Status: Married;
Nationality: Indian;
Language Knowledge: Hindi, English.

References:

Prof. Ashwani Kumar Sharma (Ph.D. Supervisor)
Department of Biosciences and Bioengineering.
Indian Institute of Technology Roorkee
Roorkee 247667, India.
Email: aksbsfbs@iitr.ac.in
Phone +911332-285657
Webpage https://bt.iitr.ac.in/~BT/aksbsfbs

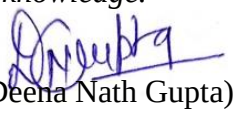
Prof. Pravindra Kumar
Department of Biosciences and Bioengineering.
Indian Institute of Technology Roorkee
Roorkee 247667, India.
Email: pravindra.kumar@bt.iitr.ac.in
Phone +91-1332-285072
Webpage https://bt.iitr.ac.in/~BT/kumarfbs

Prof. Shailly Tomar
Department of Biosciences and Bioengineering.
Indian Institute of Technology Roorkee
Roorkee 247667, India.
Email: shailly.tomar@bt.iitr.ac.in

Declaration

I hereby declare that the above-mentioned information is true to the best of my knowledge.

Thanking you.



(Deena Nath Gupta)