

Curriculum Vitae

Dr. Deena Nath Gupta (Ph.D. IIT Roorkee)
Assistant Professor Biochemistry
Department of Allied and Applied Science
University of Patanjali, Haridwar, Uttarakhand, India.
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Research Expertise:

Cloning, expression, and purification of protein; Characterization of Protein, Protein Structure Function relationship, Crystallization of Protein, Inhibitor binding studies, Structural changes in protein by mutation, Drug discovery and development, Structure modeling, BLAST, MSA, Docking of screened inhibitor molecules. Cell line-based assay: MTT assay, Wound healing, cell proliferation.

Instrumental expertise:

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*”. (Under the Supervision of Dr. A.K. Sharma)
- **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.

Teaching Experience:

Assistant Professor Biochemistry (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:

- Coordinator ICT Cell, University of Patanjali, Haridwar.
- 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.

Subjects Taught:

- Biochemistry (BSHB-CC-301)
- Biophysics (BSHB-CC-202)
- Human Health and Disease (BSHB-ID-101)
- Endocrinology (BSHB-CC-602)
- Metabolism (BSHB-CC-401)
- Bioinformatics (BSHB-CC-501)

Research Publications:

1. 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. (2024) Characterization of haloacid dehalogenase superfamily acid phosphatase from *Staphylococcus lugdunensis*, *Archives of Biochemistry and Biophysics*, 109888, 0003-9861, <https://doi.org/10.1016/j.abb.2024.109888> (I.F. 3.91).
2. **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*. *Applied Biochemistry and Biotechnology*, 1559-0291. <https://doi.org/10.1007/s12010-023-04798-y> (I.F. 3.00).
3. 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> (I.F. 3.23).

4. 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> (I.F. 3.91).
5. **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> (I.F. 8.02).
6. **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 *CLa*. *Journal of biomolecular structure & dynamics*, 41(12), 5776–5788. <https://doi.org/10.1080/07391102.2022.2096118> (I.F. 5.23).
7. **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> (I.F. 5.23).
8. Sapna Lonare; **Deena Nath Gupta**; Harry Kaur; Surabhi Rode; Shalja Verma; Mrugendra Gubyad; Dilip Ghosh; Pravindra Kumar; Ashwani Kumar Sharma (2024) Characterization of cationic amino acid binding protein from *Candidatus Liberibacter asiaticus* and in silico study to identify potential inhibitor molecules. (Submitted in Protoplasma, EMID:8d593fc6a0347cdf). (I.F. 3.3).
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, 28-34. doi.org/10.1016/j.bbrc.2021.09.076 (I.F. 3.32).
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> (I.F. 2.34).

Book Chapter:

1. Md Shahid Alam, Surabhi Rode, Harry Kaur, Sapna Lonare, and **Deena Nath Gupta** (2022). *Bionanotechnology Towards Sustainable Management of Environmental Pollution*, 29. (Routledge, Taylor & Francis Group) <https://doi.org/10.1201/9781003270959-2>

Conference/Seminar/Workshops:

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). In CCP4 Crystallography school and workshop from 22-26 October 2018 at the Institute of Microbial Technology (CSIR-IMTech), Chandigarh, India. (*Poster presentation*)
5. 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.
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 International Conference on Advances in Biosciences and Biotechnology (ICABB-2021) from Jan 28-30, 2021 entitled “**Recent Trends in Biosciences and Biomedical Research**” held at Jaypee Institute of Information Technology, Noida, India.
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.
10. 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.

11. Participated in a full-day “Workshop on InCites” organized by Sponsored Research and Industrial Consultancy, IIT Roorkee on 18 June 2019.
12. Attend the Himalayan summit “**Design Innovation Challenges in the Himalayan Region**” on May 21, 2019, organized by Design Innovation Center at the Indian Institute of Technology (IIT) Roorkee Haridwar, India.
13. 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).
14. Participated in one day workshop on “**Characterization of Nanoparticles using Zetasizer: Hands-on Training**” on 3 Nov. 2018 organized by Department of Biotechnology and Center of Excellence, Nanotechnology, IIT Roorkee, India.
15. Attend the “**International Cancer Congress 2016, Hematological Malignancies: Controversies & Consensus**” on 06 Feb. 2016, organized by Dharamshila Hospital, New Delhi.
16. Participated in “**National Workshop on Writing Research Report**” from March 29, 2010 organized by Institute of Education Bundelkhand University, Jhansi (U.P.).
17. Participated in “**National Conference on Emerging Areas in Bio-Medical Science**” from March 27, 2010 organized by Institute of Bio-Medical Science, Bundelkhand University, Jhansi (U.P.)
18. Actively participated in “**National Symposium on Translational Research in Health Sciences**” from November 24, 2009, organized by Society of Young Scientist All India Institute of Medical Sciences (AIIMS), New Delhi-110029.
19. Attend the International conference on “**Achieving Holistic Health through Ayurveda along with Advanced Technologies**” from 1-3 May 2023 organized by Center of Excellence, Patanjali Ayurveda Hospital, Ministry of AYUSH, Patanjali Research Institute and University of Patanjali, Haridwar, India.
20. Organizing Member of International conference on “**Plant to Pathogen Series III: Rethinking the Ethnopharmacology**” from 28th Feb – 2nd March 2023 organized by Patanjali Ayurveda Hospital, Ministry of AYUSH and Patanjali Research Institute, Haridwar, India.
21. Organizing Member of National workshop on “**Indian Meditation System for Holistic**

health” from 18-19 August 2023 organized by the Department of Yoga, University of Patanjali, Haridwar, India.

22. Attend the International conference on “**International Naturopathy Day**” from 18-19 Nov. 2023 organized by Central Council for Research in Yoga and Naturopathy, Ministry of AYUSH and University of Patanjali, Haridwar, India.

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:

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


References:

- Prof. Ashwani Kumar Sharma (Ph.D. Supervisor)
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- Prof. Pravindra Kumar
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Declaration

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

Thanking you.


(Deena Nath Gupta)