
Curriculum Vitae

Dr Neetu

Flat No. D2, Block 1, GSI quarter
Geological Survey of India, Bandlaguda
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Academic Qualifications

2015-2022

PhD Chemistry
School of Physical Sciences,
Jawaharlal Nehru University, New Delhi, 110067, India.

Thesis Supervisor: Dr. Manoj Munde

Thesis title: Studying Protein-Protein Interaction through Spectroscopy, Calorimetry, and Computational Techniques and Fabricating Peptide sequences from their Interfaces as Modulators

2014-2015

B.Ed
St. Luke College of Education, Chandpur, Faridabad-121101
Maharshi Dayanand University, Rohtak-124100, India

2010-2012

M.Sc. in Chemistry
Department of Chemistry,
Jamia Millia Islamia University,
Jamia Nagar, New Delhi-110025, India.

2006-2009

B.Sc. (Physics, Chemistry and Mathematics)
Dyal Singh College, Lodhi Road-110003
Delhi University

Fellowships/Awards

2018-2021

CSIR SRF direct fellowship

Teaching experience

2014-2015

Subject matter expert in Transtutors pvt. Ltd.
Tuition classes for students of class XI.

Research experience

2015-2021

Ph.D. research experience is in the field of biophysical chemistry in which we had studied the insights of thermodynamic and conformational changes during the complex formation between two or more biomolecules.

2014

Central council for research in Homoeopathy, Deptt of AYUSH, Ministry of Health and Family Welfare, Govt of India New Delhi.

Job Title- Project fellow

Project (Pilot Study)

Physicochemical studies of various homoeopathic drug formulations using volumetric, acoustic, viscometric, optical and conductivity measurements (A pilot study).

2012-2014

Dyal Singh College, University of Delhi

Job Title-Project Fellow

Project

Study on intermolecular interactions in industrially important multicomponent solvent systems by using physicochemical and acoustic methods.

Project Investigator

Prof. Anil Kumar Nain, Associate Professor

Physical chemistry, Department of Chemistry,

Dyal Singh College (University of Delhi), Lodhi Road, New Delhi 110003

Publications

1. Physicochemical study of solute-solute and solute-solvent interactions of l-phenylalanine in (water + arabinose / glucose /sucrose) solutions at different temperatures. Anil Kumar Nain, Renu Pal, **Neetu**. The Journal of Chemical Thermodynamics. 2014 (**68**) 169-182.
2. Volumetric, ultrasonic and viscometric studies of solute-solute and solute-solvent interactions of l-threonine in aqueous- sucrose solutions at different temperatures. Anil kumar nain, Renu pal, **Neetu**. The journal of chemical thermodynamics, 2013 (**64**) 172-181.
3. Probing solute-solute and solute-solvent interactions in (l-arginine + d-xylose/l-arabinose +

water) solutions at different temperatures by using volumetric and viscometric methods. Anil Kumar Nain, Monika Lather, **Neetu**. 2013 (**63**) 67-73.

4. Thermodynamic and conformational analysis of the interaction between antibody binding proteins and IgG. **Neetu Tanwar**, Manoj Munde. International Journal of Biological macromolecules, 2018 (**112**) 1084-1092.

5. Molecular insights into trypanothione reductase- inhibitor interaction: A structure-based review. Neha Tiwari, **Neetu Tanwar**, Manoj Munde. Arch Pharm Chem Life Sci, 2018, **351** (6), 1700373.

6. Delineation of the Residue of Bacillus anthracis Zinc Uptake Regulator Protein Directly Involved in Its Interaction with Cognate DNA. Divya Kandari, Hemant Joshi, **Neetu Tanwar**, Manoj Munde, Rakesh Bhatnagar. Biol Trace Elem Res (2020) 10.1007/s12011-020-02427-x

7. Probing the interaction of Protamine and with Zn- insulin through biophysical and molecular docking studies. Soumya Aggarwal, **Neetu Tanwar**, Manoj Munde. Authorea. August 28, 2020. 10.22541/au.159863539.90657065.

8. Design of peptide sequences based on the interfacial knowledge of the protein G-IgG crystallographic complex and their Binding studies with IgG. **Neetu Tanwar**, Rupal Ojha, Soumya Aggarwal, Vijay Kumar Prajapati, Manoj Munde (*manuscript under preparation*).

9. Binding mechanism analysis of HSA with peptides screened by comparing sequences at the interfaces of HSA: Protein G complexes. **Neetu Tanwar**, Soumya Aggarwal, Manoj Munde. (*manuscript under preparation*)

Skills

Instruments

Isothermal calorimetry titration (ITC), circular dichroism (CD), surface plasmon resonance (SPR), atomic force microscopy (AFM), dynamic light scattering (DLS) ultra-violet spectroscopy (UV), fluorescence spectroscopy, single-capillary pycnometer, ubbelhode type suspended viscometer and single crystal variable path multi frequency ultrasonic interferometer.

Softwares

Microsoft Office packages, Chem Draw, Curve Expert 1.4., Kaleidagraph 4.0, Pymol, ImageJ, origin 8.0, Discovery studio 2017, Autodock vina, HADDOCK protein docking server, WI Tech suit 5.0

Soft skills

Familiarity with academic publishing and university environment. Self-motivated and detail oriented, Research skills, Proofreading, PowerPoint and Word proficiency, Project management.

Scientific Visits/Conferences/ Workshops

Workshops

Circular Dichroism Spectroscopy and its research application, AIRF, JNU, New Delhi, 24th Nov., 2017

Bioassays and bioefficacy models, tools, targets and technologies, paradigm shift in new drug discovery and biotechnology research, GIAN in collaboration of JNU and MHRD, New Delhi, 25 July-5 August, 2016

Instructional workshop on Computational methods in drug discovery, SCMM & SCIS, JNU and NNMCB SERB, DST, New Delhi, 9-11 August, 2016

X-ray crystallography of Macromolecules, AIRF, JNU, 28 August, 2015

Conferences

National symposium (Biophysika-2019), Centre for Interdisciplinary Research In Basic Sciences, Jamia Millia Islamia, New Delhi, 4th October 2019.

International webinar series on **Biomolecular Dynamics and Kinetics**, Department of Chemistry, National Institute of Technology (NIT), Rourkela in Association with Indian Photobiology Society (IPS), 23-27th August, 2020.

43rd Indian Biophysical Society Meeting (Molecules to Systems), IISER Kolkata, 15-17 March, 2019.

Trends in Biochemical and Biomedical Research. Advances and challenges (TBBR-2018), BHU, Varanasi, 13-15 Feb, 2018.

Responsive Molecules and Material, SPS March Meeting, JNU New Delhi, 2018

Science and technology for sustainable future, National Science day, DST and JNU, 28th Feb, 2018.

Annual Open Day, JNU, New Delhi, 2016

Recent Advances in Chemistry at Jamia Millia Islamia, March 2012

ISCAS-2011, 7th National Symposium & conferences on Solid State Chemistry & Allied areas at Jamia Millia Islamia in November 2011.

Chemistry in our lives- Issues and Challenges at Jamia Millia Islamia in 2011

References

- Dr. Manoj Munde
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School of physical Sciences,
Jawaharlal Nehru University,
New Delhi, India, 110067
Tel. +91- 11-26738771
Email: mmunde@mail.jnu.ac.in,
mundemanoj@gmail.com
Relation: ***Thesis Supervisor***
- Prof. Anil Kumar Nain
Associate Professor Chemistry
Dyal Singh College, Lodhi Road,
University of Delhi-110003
Email: ak_nain@yahoo.co.in
aknain@dsc.du.ac.in
Relation: **Research Project Investigator**
- Dr. Shoban Sen
Associate Professor Chemistry
School of Physical Sciences
Jawaharlal Nehru University
New Delhi 110067, India
Phone: +91-11- 26738803
E-mail: sens@mail.jnu.ac.in,
sobhan.sen@gmail.com
Relation: ***PhD coordinator***

Personal Information

- Date of birth
11-11-1988
- Gender
Female
- Father's Name
Darshan Kumar
- Marital status
Married
- Husband's Name
Inderjeet Singh
- Nationality
Indian
- Language known
English, Hindi, Punjabi

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