Dr. Nivedita Rai

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Flat No. 22, RZ-L4, Block-L, Gali No. 1, In-front of PNB Bank, Mahavir Enclave, New Delhi- 110045

Educational Qualification

- **Ph.D. Bioinformatics** from Pondicherry University (2018).
- **M.Sc. Bioinformatics** from University of Allahabad, Uttar Pradesh in 2009 with 68.78%
- **B.Sc.** (Botany, Chemistry, and Zoology) from University of Allahabad, in 2007 with 66.74%

Work Experience

- Working as **Bioinformatics Specialist** in National Centre for Disease Control, **INSACOG unit**, Delhi.
- Post-Doc Research Fellow in project **"*Predictive modeling of intrinsically disordered proteins*"** funded by CSIR under **Prof. Shandar Ahmad,** SC&IS, JNU, New Delhi.
- Senior Research Fellow in ***Phenomics*** project under **Dr. Anil Rai** funded by ICAR-IASRI, New Delhi.
- **Two month NGS Project training** under **Dr. Amit Katiyar**, Scientist C, Department of Biophysics, AIIMS.
- **Ph.D.** entitled **"*Dynamics of multitasking DegP and the role of HpHtrA as a therapeutic target: a computational approach on HtrA family proteins*"** under the supervision of **Dr. R Amutha**, Associate Professor, Centre for Bioinformatics, Pondicherry University

Bioinformatics and Computational Skills

- Next-Generation Sequence analysis of Genomic data
- Molecular Dynamics Simulation like All-atom, Coarse-grain simulation
- Molecular docking: Autodock, Schrodinger, Discover studio
- HMM, SVM and ANN: machine learning approaches
- Blast & ClustalW: Nucleic acid and Protein sequence analysis, MODELLER, Ab-initio modeling, Threading, Phylip, MEGA: Evolutionary studies; molecular evolution & Chimera, PyMOL,VMD, Discovery studio, Swiss PDB viewer: Graphical interfaces

Computer Skill

- Programming: R Bio-conductor; Linux platform: Ubuntu, Fedora, RedHat, etc, and Windows OS.

Publication

- **Nivedita Rai** *et al,* C***SBJ*** (2015), https://doi.org/10.1016/j.csbj.2015.04.004 (**I.F. 7.271**)
- **Nivedita Rai** *et al, **Microbial Pathogenesis*** (2018), https://doi.org/10.1016/j.micpath.2018.03.027 (**I.F. 3.738**)
- **Nivedita Rai** *et al.,* book chapter entitled "**Broad Applications of Network Embeddings in Computational Biology, Genomics, Medicine, and Health**" in Wiley- Scrivener.
- **Nivedita Rai,** Amit Katiyar, "Identification of Differentially Expressed Genes in Amyotrophic Lateral Sclerosis using Meta-analysis of Microarray Datasets" (manuscript under preparation)

Awards

- Qualified GATE-2010, conducted by IIT Guwahati, with 91.40% percentile in Life Sciences.
- Qualified GATE-2009, conducted by IIT Roorkee, with 87.23% percentile in Life Sciences.

Conferences/Workshops

- Poster presented in **1st International Conference** (2018), organized by School of Bioengineering Sciences & Research, MIT-ADT University, Pune, India.
- Poster presented in **Bioinformatica Indica** (2016), organized by Computational Biology and Bioinformatics, Kerala University, Trivandrum, India.
- Participated in training program on **Next Generation sequencing (NGS)-Bioinformatics and Data Analysis** held during August 3-6, 2016 at AU-KBC research Centre, Chennai**.**
- Participated in **International conference on Biomolecular forms and functions** held by IISC Bangalore, India, January 8-11, 2013.
- Participating on short term course on **Development and Application of Molecular dynamics simulations and Application** offered by **Prof. Sourav Pal (from IITB**) organized Centre for Bioinformatics, Pondicherry University (July 6-8, 2017).
- Participating on short term course on **Modeling complex Biomolecular systems and Processes using Molecular dynamics simulations** offered by **Dr. U. Deva Priyakumar (from IIITH)** organized BICPU, Pondicherry University (September 6-10, 2016).
- Attended Author workshop jointly organized by **Springer and Ananda Rangapillai Library,** Pondicherry University, February 6, 2014.

Research interest

Biological systems reflect multiple layers of increased complexity, redundancy, time specificity and data handling issues. Integration of genomic sequences, their alignments, and functional annotation at sequence level and studying the complex host pathogen interaction mechanism, structural changes and protein folding/unfolding pathway analysis, is particularly of my interest.

Personal information

Date of Birth	**:** 1st July, 1984
Nationality	**:** Indian
Status	**:** Married
Permanent Address	**:** C/o Late Shri Shankar Deo Singh, Village Mahgaon - Marai, Post-Garthama, Dist. Varanasi, U.P. 221208

References

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Prof. Basant K. Tiwary
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Prof. Shandar Ahmad
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Email: shandar@jnu.ac.in
Contact No. 7290889021

I, hereby declare that all the above provided information is true to my knowledge.

Date:
Place: New Delhi (**Nivedita Rai**)