

Dr. Zaved Hazarika

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Google Scholar: https://scholar.google.com/citations?hl=en&user=vdX3oPEAAAAJ&view_op=list_works&sortby=pubdate, **H-Index:** 6, **Citations:** 171

Technical Skills

- **Computing & Operating Systems:** Workstation, GPU server, HPC, Linux, Windows
- **Programming Language:** PERL, Shell Programming, Python, R
- **Molecular Dynamics:** GROMACS, GROMACS patched Plumed (Metadynamics)
- **Virtual Screening:** AutoDock Vina, GOLD, Glide
- **Homology Modeling/Structure Prediction:** Modeller, SWISS-MODEL, I-TASSER
- **Tools and Software:** Pymol, Chimera, VMD, Yasara, AutoDock, Molegro Virtual Docker, Glide, BioEdit, and other Bioinformatic Tools and Servers.

Research Interests

Structural Bioinformatics, Computational Biophysics, Computer-aided Drug Design, Database Management

Academic Qualification

PhD titled “**Impact of Silver and Zinc Oxide nanoparticles on the structural and functional aspects of few human peptides, proteins and protein-ligand complexes**” from Dept. of MBBT, Tezpur University, Assam, India.

Degree	Specialization	Institute	Board/ University	Year of Passing	Percentage / CGPA
PhD	Bioinformatics	Tezpur University	Tezpur University	2021	-
MSc	Bioinformatics	Pondicherry University	Pondicherry University	2016	7.04
BSc	Biotechnology	St. Anthony's College, NEHU	NEHU	2014	61.2
Class 12 th	Bio, Chem, Maths, Phy	Kendriya Vidyalaya, AFS, Jorhat	CBSE	2011	61.2
Class 10 th	Science	Kendriya Vidyalaya, AFS, Jorhat	CBSE	2009	81.4

Publications

1. Borkotoky S., Dey D., **Hazarika Z.**, Joshi A. and Tripathi K. (2022). Deciphering Viral Dynamics Through Molecular Dynamics Simulations- A Brief Overview. *Biophys. Chem.* DOI: 10.1016/j.bpc.2022.106908 [IF: 3.628]
2. **Hazarika Z.**, Saikia S. and Jha, A.N. (2022). Interaction of Nanomaterials with Protein-Peptide. *Curr. Protein Pept. Sci.*, 23, 548-562 [IF: 3.118]
3. Jakhmola, S., **Hazarika Z.**, Jha, A.N. and Jha, H.C. (2021). *In silico* analysis of anti-viral phytochemicals efficacy against Epstein-Barr Virus glycoprotein H. *J. Biomol. Struct. Dyn.*, 40, 5372-5385 [IF: 5.235]
4. Das S. [#], **Hazarika Z.** [#], Sarmah S., Baruah K., Rohman M.A., Paul D., Jha, A.N., & Roy, A.S. (2020). Exploring the interaction of bioactive kaempferol with serum albumin, lysozyme and

hemoglobin: A biophysical investigation using multi-spectroscopic, docking and molecular dynamics simulation studies. *J. Photochem. Photobiol. B.* 205,111825 [IF: 6.814] [**#Equal Contribution**]

5. **Hazarika Z.** and Jha, A.N. (2020). Computational analysis of Silver nanoparticle - human serum albumin complex. *ACS Omega*,5,170-178 [IF: 4.132]
6. Das S., Sarmah S., **Hazarika Z.**, Rohman M.A., Sarkhel P., Jha, A.N., & Roy, A.S. (2020). Targeting te heme protein hemoglobin by (–)-epigallocatechin gallate and the study of polyphenol–protein association using multi-spectroscopic and computational methods. *PCCP*,22,2212-2228 [IF: 3.945]
7. Asthana, S., **Hazarika Z.**, Nayak, PS., Jha, A.N., Mallick, B. & Jha, S. (2019). Insulin adsorption onto zinc oxide nanoparticle mediates conformational rearrangement into amyloid-like structure with enhanced cytotoxic propensity. *BBA-General Subjects*,1863,153-166 [IF: 4.117]
8. Das, S., Khanikar, P., **Hazarika Z.**, Rohman, M. A., Uzir, A., Jha, A.N., & Roy, A.S. (2018). Deciphering the Interaction of 5, 7-Dihydroxyflavone with Hen-Egg-White Lysozyme through Multispectroscopic and Molecular Dynamics Simulation Approaches. *ChemistrySelect*, 3(17), 4911-4922 [IF: 2.307]

Publications under Review

1. Borkotoky S., Dey D. and **Hazarika Z.** (2022). Structural perspective of the interactions between ACE2 and SARS CoV-2 Spike protein RBD. (*Under Review*)
2. **Hazarika Z.** and Jha, A.N. (2022). Structural and functional premise of transport protein transthyretin in sight of Silver and Zinc Oxide nanoparticles through the lens of computational microscope. (*Under Review*)

Book Chapters

1. **Hazarika Z.**, Hazarika, U., Sharma, B. and Jha, A.N. (2022) Importance and potential applications of Nanobiotechnology and Systems Biology for Livestock Science. In: Systems Biology and Bioinformatics in animal sciences. (*Under Review*)
2. Dey D., **Hazarika Z.**, Pandey A.K., and Borkotoky S (2022) Livestock Viral Diseases and insights to Systems Biology. (*Under Review*)
3. Rajkhowa, S., **Hazarika Z.** and Nath Jha, A. (2021) Systems biology and bioinformatics approaches in leishmaniasis. In: Applications of Nanobiotechnology for Neglected Tropical Diseases. *Elsevier*, DOI: 10.1016/B978-0-12-821100-7.00018-2
4. **Hazarika Z.**, Rajkhowa, S. and Jha, A.N. (2020) Role of Force Fields in Protein Function Prediction. In: Homology Molecular Modeling- Perspectives and Applications. *InTechOpen*, DOI: 10.5772/intechopen.93901

Conference Publication

1. **Hazarika, Z.** and Nath Jha, A. (2020). A Comparative Evaluation of Docking Programs using Influenza Endonuclease as Target Protein. *IEEE International Conference on Computational Performance Evaluation (ComPE 2020)*, 321-326, DOI:10.1109/ComPE49325.2020.9200180

Awards

1. **SERB International Travel Grant** for Oral Presentation and attending International Conference on Bioinformatics (InCoB), at Universitas YARSI, Jakarta, Indonesia from 10th-12th Sep, 2019 (ITS/2019/003976).
2. **DBT CTEP Grant** for Oral Presentation and attending International Conference on Bioinformatics (InCoB), at Universitas YARSI, Jakarta, Indonesia from 10th-12th Sep, 2019 (DBT/CTEP/02/20190749944).
3. **Best Oral Presentation Award** in National Seminar on Current Research in Drug Discovery and Development at **Dibrugarh University, Dibrugarh** from 13th-14th Nov, 2019.
4. **Best Scientific Research Poster Presentation Award** in the Assam Science Festival 2019 at Tezpur University, Tezpur held from 23rd to 25th March, 2019.

Projects Experience

- **Senior Project Associate** at CSIR-North East Institute of Science and Technology, Jorhat from Feb 2021 to May 2022.
- SRF in **DBT Project** titled “Nanoparticle based approach to enhance the AMP efficacy against AMP resistant bacteria” from Jan 2019 to April 2020.
- JRF in **DBT Project** titled “Nanoparticle based approach to enhance the AMP efficacy against AMP resistant bacteria” from Nov 2017 to Apr 2018.
- Research Student in **DBT BIF**, Tezpur University from Nov 2016 to Oct 2017

Oral Presentation

1. **Oral presentation** at IEEE International Conference on Computational Performance Evaluation (ComPE), **North Eastern Hill University, Shillong** from 2nd-4th Jul, 2020.
2. **Best Oral Presentation Award** in National Seminar on Current Research in Drug Discovery and Development at **Dibrugarh University, Dibrugarh** from 13th-14th Nov, 2019.
3. **Oral presentation** at International Conference on Bioinformatics (InCoB), **Universitas YARSI, Jakarta, Indonesia** from 10th-12th Sep, 2019.

Poster Presentation

1. “**Deciphering the molecular interactions of kaempferol with three carrier proteins**” in International Conference on Bioinformatics (InCoB) conducted by Asia-Pacific Bioinformatics Network (APBioNET), Singapore from 25th to 29th Nov, 2020.
2. **Best Scientific Research Poster Presentation Award** in the Assam Science Festival 2019 at Tezpur University, Tezpur held from 23rd to 25th March, 2019.
3. “**Computational Interaction analysis of HSA-Nanoparticle**” in "Accelerating Biology 2019: Towards Thinking Machines" Symposium at **CDAC, Pune** from 5th Feb to 7th Feb, 2019.
4. “**ZnO Nanoparticle interaction with Human Serum Albumin using Molecular Dynamics Simulation**” in International Conference on Bioinformatics at JNU, New Delhi from 26th Sep to 28th Sep, 2018.

5. “**Docking Studies of Inhibitors against Polymerase Acidic protein in Influenza A**” in GIAN workshop on “Protein Structure and Drug Discovery” at University of Hyderabad, Hyderabad from 27th Aug to 5th Sep, 2017.
6. Poster presented in National Seminar on Diarrhoeal Disease Burden and Management: Special Reference to North Eastern India from 10th-11th March 2017, organized by Dept. of MBBT, Tezpur University, Tezpur.

Conferences/Seminars/Workshops Attended

1. Machine Learning in R & Python at Tezpur University from 28th Jan to 1st Feb, 2019
2. “Recent Advances in Bioinformatics” at CSIR-NEIST, Jorhat from 23rd to 26th May, 2019
3. “International Seminar cum Workshop on Computer Aided Drug Design for Human Pathogens (CADDHP)” at Tezpur University, Tezpur from 12th to 17th February, 2018.
4. “Networks in Biological Systems” at Dept. of MBBT, Tezpur University, Tezpur from 18th to 19th Feb 2017.
5. 9th NEBInet Coordinators Annual Meet, at Tezpur University, Tezpur from 17th to 19th Jan, 2017.
6. “Biomolecular Interactions and Dynamics” at A.A.U. Khanapara, Guwahati from 3rd to 6th Jan, 2017.
7. GIAN Winter School on “Molecular Evolution in Bacteria” at Tezpur University, Tezpur from 5th to 12th Dec, 2016.
8. 103rd National Science Congress at University of Mysore, Mysore from 3rd to 7th Jan 2016.
9. Data Deluge in Biology: Use of High-Performance Grid and Cloud Computing at Jorhat Medical College and Hospital, Jorhat from 19th to 20th Dec 2013.
10. Intellectual Property Rights (Patent-O-Mania) at St. Anthony’s College, Shillong from 6th to 7th Aug, 2013.

Scientific Societies

1. Bioclues (Life Member)
2. Society for Ethnopharmacology

References

- Dr. Anupam Nath Jha (PhD Guide)
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