

SHREYA BHATTACHARYA

Prime Minister's Research Fellow, Department of Biosciences and Bioengineering, IIT Guwahati

E Email: shreya199713@gmail.com/
shreya.bhattacharya@iitg.ac.in

P Phone: +91 8334993436, +91
3612584245 (lab)

W Website: <https://shreya-bhattacharya.weebly.com>

EDUCATION

Current Affiliation:

Ph.D. student at Department of Biosciences and Bioengineering, Indian Institute of Technology, Guwahati (July 2021 - present)

Supervisor: Dr. Priyadarshi Satpati

Research Topic: Structure based thermodynamics of CRISPR/Cas9 genome editing: Insight from computer simulations

Grade: 10/10 in coursework

Previous Degrees:

• **M.Tech in Biotechnology** (2019-2021), Indian Institute of Technology, Guwahati; **Grade:** 9.73/10

• **B.Tech in Biotechnology** (2015-2019), Amity University Kolkata; **Grade:** 9.59/10 (Gold Medalist)

ONLINE COURSES

• Learn Molecular Dynamics Simulations from scratch [Udemy (May, 2021)]

• Molecular Dynamics Simulations for drug discovery [Udemy (June, 2021)]

CONFERENCES/WORKSHOPS

• 8 Day Technical Hands-On Certificate Training Md Simulations | Insights Of Computational Biophysics Using Gromacs, Namd & Vmd by BDG Lifesciences (21-28th February, 2022)

• Workshop on Writing for and getting published in International academic journals by Research Conclave, IIT Guwahati (21th January, 2022)

• Workshop on Molecular Docking by The institute of Biotechnological research (27th November, 2021)

• A Limelight on Human Gp130 and Its Deleterious Mutations: A Computational Sequence Level Approach for Hepatocellular Carcinomas. In Proceedings of the International Conference on Computing and Communication Systems: I3CS 2020, NEHU, Shillong, India (Vol. 170, p. 441). Springer Nature.

PUBLICATIONS (selected)

Total articles: 12 | Number of citations: 30 | h-index: 4

Bhattacharya Shreya, & Satpati Priyadarshi. (2022). Insights into the mechanism of CRISPR/Cas9 based genome editing from Molecular Dynamics Simulations. **ACS Omega**, (Accepted on November 22, 2022, Manuscript ID: ao-2022-05583e.R2).

Bhattacharya Shreya, & Ray Sujay (2021). In silico screening and exploration into phenotypic alterations of deleterious oncogenic single-nucleotide polymorphisms in HSPB1 gene. **Genomics** 113. doi.org/10.1016/j.ygeno.2021.06.017

Bhattacharya Shreya, Banerjee Arundhati & Ray Sujay. (2020). Development of new vaccine target against SARS-CoV2 using envelope (E) protein: An evolutionary, molecular modeling and docking based study. **International Journal of Biological Macromolecules**. 172. 10.1016/j.ijbiomac.2020.12.192.

Bhattacharya Shreya, Ghosh Puja, Banerjee Debasmita, Banerjee Arundhati & Ray Sujay. (2020). In silico Drug Target Discovery Through Proteome Mining from M. tuberculosis. **Combinatorial Chemistry & High Throughput Screening**. 23. 10.2174/1386207323666200219120903.

Bhattacharya Shreya, Dhar Shreyeshi, Banerjee Arundhati & Ray Sujay. (2019). Structural, Functional, and Evolutionary Analysis of Late Embryogenesis Abundant Proteins (LEA) in Triticum aestivum: A Detailed Molecular Level Biochemistry Using in silico Approach. **Computational Biology and Chemistry**. 82. 10.1016/j.compbiolchem.2019.06.

AREA OF INTEREST

Molecular dynamics simulations, free energy calculations, computational biology, bioinformatics

KEY SKILLS

Technical skills:

- Molecular dynamics simulations
- Free energy calculations
- Computational chemistry
- Molecular modeling, and docking
- Sequence level analysis
- Systems biology
- Basics of C, C++, PYTHON

Soft skills:

- Excellent communication skills (English, Hindi, Bengali)
- Writing skills (research papers, letters, reports, essays, etc.)
- Problem-solving
- Logical reasoning
- Hardworking and self-motivated

ACHIEVEMENTS/AWARDS

- Received **Prime Minister's Research fellowship** through direct entry channel in May 2021 cycle
- Qualified **GATE Biotechnology** 2019, all India rank 203
- **Gold medalist** in B.Tech Biotechnology, Amity University, Kolkata
- Won **All round best student award** in B.Tech Biotechnology
- Achieved school's **highest marks in Biotechnology** in 12th at BDM International, Kolkata

TEACHING EXPERIENCE

Taught at the Department of Botany, North Gauhati College, Assam, under the PMRF scheme (Feb-June 2022)

Currently teaching at the Department of Zoology, North Gauhati College, Assam, under the PMRF scheme (July 2022-present)