NABAJIT KUMAR BORAH

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Google Scholar | LinkedIn

Education

Amity University, Noida **2021 – Present**
B.Tech + M.Tech Biotechnology (Integrated)

CGPA: 9.2/10

Relevant Coursework: Computational Biology, Recombinant Biotechnology, Cancer Biology, Tissue Engineering, Machine Learning, Biostatistics, Python

Technical Skills

- **Programming:** Python, ML (Scikit-learn, Keras), Data Analysis (Pandas, NumPy), Linux
- **Bioinformatics:** MD Simulation, AutoDock, PyMOL, Schrödinger Suite, Gene Expression Analysis, ADMET Analysis
- **Wet Lab:** Gel Electrophoresis, SDS-PAGE, PCR, ELISA, BCA Protein Assay, GPC, EMSA

Experience

Research Intern **May 2025 – July 2025**
CSIR–Institute of Genomics and Integrative Biology, Biophysics Lab (Dr. Mary Ekka)

- Studied G-quadruplex structures and their biophysical characterization
- Performed Electrophoretic Mobility Shift Assay (EMSAs), BCA protein assay and Gel Permeation Chromatography (GPC) to check G quadruplexes and its interactions with TELO DNA and TERRA RNA

Research Intern **May 2024 – July 2024**
CSIR–Institute of Genomics and Integrative Biology, Biophysics Lab (Dr. Mary Ekka)

- Conducted structural bioinformatics analysis on RNA Binding Domains of Nucleolin
- Performed RNA–protein docking experiments

In-House Research Intern **May 2023 – July 2023**
Centre for Computational Biology and Bioinformatics, Amity Institute of Biotechnology

- Screened 150+ phytochemicals using PubChem, ZincDB, OpenBabel, LigPrep (Schrödinger Suite), AutoDock, PyMOL
- Identified 3 potential drug candidates via virtual screening (STRING-DB, Cytoscape) for Huntington's Disease
- Analyzed RNA-seq datasets to identify differentially expressed genes in HD pathways

Leadership & Achievements

- **President, Illuminati Technical Club** (2022 – Present): Organized 5+ workshops on Hands on Bioinformatics and AI
- **3rd Place**, Oral Presentation at FAVBS-2025: *Integrative Structural Biology for Drug Discovery*
- **2nd Place**, Oral Presentation at APB-2023: *Huntington's Disease Bioinformatics Analysis*
- **Technical Head**, ICEIL-2023 Symposium on Technopreneurship in Life Sciences
- **Core Technical Team**, Amity Youth Fest (2023, 2024)
- Led my team at **National Children Science Congress** (NCSC) 2016, IIT Bombay

- **INSPIRE Award Recipient**, Department of Science and Technology (2013)

Volunteering Experience

Pehechaan – The Street School (NGO), New Delhi **Feb – Apr 2023**
Teacher & Social Media Strategist

- Taught math, English, and science to children aged 8–13
- Increased NGO's social media visibility by 25% using KPIs and content strategies
- Managed content for Facebook, Instagram, Twitter, and LinkedIn
- Skills gained: Canva, Social Media Marketing, Project Management, Teaching

Publications

- Borah, N.K. et al. (2024). Artificial Intelligence-Powered Molecular Docking. *AI and ML in Drug Design*, Wiley. DOI
- Borah, N.K., Tripathi, Y., Parashar, A., Santoshi, S., Bansal, H. (2024). Dynamics of *Aspergillus*: Therapeutic Challenges and Drug Resistance. *Recent Advances in Human Fungal Diseases*, Springer. DOI
- Bose, S., Azad, M.A., Borah, N.K., Kaur, N. (2025). Serine Proteases in Cancer Diagnosis. *Pathophysiological Aspects of Proteases in Cancer*, Academic Press. DOI
- Shukla, S., Borah, N.K., Tripathi, Y. et al. (2025). Medicinal Plant Cultivation and Conservation. *Industrial Crops Improvement*, Springer. DOI

Languages & Interests

- **Languages:** English, Hindi, Assamese (Native/Professional), German (Elementary)
- **Interests:** Photography, Music, Cinephile