

CURRICULUM VITAE



UPASANA HAZARIKA

RESEARCH SCHOLAR

TEZUPUR UNIVERSITY, NAPAM, TEZPUR

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CAREER OBJECTIVE

❖ I am very much fascinating towards the indigenous knowledge of the interesting field of biology with biophysics, (bio)informatics and computational approaches along with wanting to further explore the dynamic world with data science (AI and ML) prospective.

ACADEMIC QUALIFICATION

<u>Examination</u>	<u>University/ Board</u>	<u>Institute</u>	<u>Percentage/cGPA</u>	<u>Year</u>
M.Sc in Biophysics	Gauhati University	Pub Kamrup College	73.5%	2019
B.Sc in Physics	Gauhati University	Handique Girls' College	63%	2017
12 th	AHSEC	Mangaldai Govt Higher Secondary School	75.2%	2014
10 th	SEBA	Mangaldai Town Girls Higher Secondary School	82.5%	2012

FIELDS OF INTERESTS

- ❖ Computational biology/biophysics and bioinformatics.
- ❖ Neuroscience and membrane biophysics.
- ❖ Nanotechnology: NP synthesis process development, Application on various biological prospects, Drug discovery and molecule NP conjugation, Nanobiosensor, Graphene based nano-electronics.
- ❖ Photo biophysics researches of Biochemical prospects.

PERSONAL COMPETANCUS

- ❖ Currently working as a PhD research scholar in the department of molecular biology and biotechnology, Tezpur University, Assam, India with a zeal to make a winning career in computational biophysics/ drug discovery/ research laboratories/ pharmaceutical companies.
- ❖ Capabilities in grasping new technical concepts quickly and utilising them in a productive manner
- ❖ Possess excellent communication, interpersonal, analytical and problem-solving skills.

Laboratory Skills

Instrumentation

- FTIR, UV-Vis spectrometer and Ultrasonic interferometer
- Microscope, Centrifuge, Autoclave, Soxhlet Apparatus, SDS PAGE, PCR, Water analyzer etc (around 50 Apparatus)

Technique:

Agarose gel electrophoresis, Ab-Ag interaction, antimicrobial activity test, Antioxidant activity test, Chromatography, Cytotoxicity test, DNA estimation, Genotoxicity test, green nano particle synthesis, Haemolysis test, Lipid and protein extraction from liver and brain, Micronuclei test, PAGE, Photocatalytic activity test, Plant extract preparation, Protein estimation etc.

Computation Skill

- ❖ Language: C, C++, Linux shell scripting
- ❖ Software: AutoDock, AutodockVina, Gromac, Cytoscape, PyMol, Modeller, Database server, Origin Pro, LaTeX, DTMM, MS office, E Gel Imager etc.

Medical Instrument skill

- ❖ Measurement of Blood pressure and determination of blood group.
- ❖ Performing ECG and measurement of ESR

CONFERANCES AND SEMINARS ATTENDED

- Presented a Oral Presentation at “Reserch Industrial Conclave 2023” held at IIT Guwahati, Assam, India.
- Presented a Poster at national level mentoring symposium “INYAS-Gurukul’2023” held at Tezpur university, Assam, India.
- Presented a Oral Presentation at XIII Biennial National Conference of Physics Academy of North East (PANE -2022) held at Manipur University, Manipur, India.
- Presented a Oral Presentation at ‘Young Scientist Award’ section in 2nd International Conference on Advances in Bioprocess Engineering and technology, ICABET’2020 held at Heritage Institute of Technology, Kolkata, India.
- Presented a Poster at TEQIP-III sponsored National Conference, RAAS’2019 held at Gauhati University, Assam, India.
- Oral Presentation on ‘Science Day 2019’ at Pub Kamrup College, Kamrup, India.
- Presented a Poster on competition on world environment day 2018 organized by centre for environmentbbeducation, Assam at Pub Kamrup College, Kamrup, India.
- Oral Presentation of project in 17th state level National Children’s Science Congress 2009 as a child scientist at Shivsagar Assam, India.

RESEARCH EXPERIENCE

- ❖ **M.Sc Dissertation:** Green synthesis of gold nanoparticle from neuroactive natural source and its characterization and biochemical application.
Guide: Dr. Pankaj Kalita, Asistant Professor, Pub Kamrup College, Gauhati University.
- ❖ **B.Sc Project Title:** Construction of an inverter circuit by using 555 IC, transistor and transformer
Guide: Dr Anuradha Das Purkayastha, HOD Physics Dept., Handique Girls’ College, Gauhati University
- ❖ **Intern at Gauhati University Institute of Science and Technology, Assam (July, 2019 – Dec 2019)**
 1. **Project:** Synthesis and characterization ZnO nanoparticle by green process
 2. **Project:** Electronic and optical properties of SnS₂/MoS₂ and SnS₂/WS₂ heterostructure: A DFT and MD study
Guide: Dr. Eshankur Saikia, Asistant Professor, Gauhati University IST.
- ❖ **Pub Kamrup College, Guwahati University**
 1. **Project:** Synthesis and characterization Au nanoparticle by chemical process and study of its effect on RBC oxidative stress (Jan, 2019 – May, 2019)

2. Project: Characterisation and bio-chemical application of Au nanoparticles synthesised from a natural neuroactive source through green synthesis. (Manuscript Submitted) (August, 2018 - June, 2019)

Guide: Dr. Pankaj Kalita, Asistant Professor, Pub Kamrup College, Gauhati University

❖ **Mangaldai Town Girls' Higher Secondary School, Darrang, Assam (June, 2009 – August, 2019)**

Project: Economic importance of planned agriculture in household compound

Guide: Md. Altafulla Ahmed (science Teacher, MTGHSS, Darrang, Assam)

Research Publications

1. Jayanta S. Boruah, Chayanika Devi, **Upasana Hazarika**, P. Vijaya Bhaskar Reddy, Devasish Chowdhury, Manash Barthakur and Pankaj Kalita; Green synthesis of gold nanoparticles using an antiepileptic plant extract: in vitro biological and photo-catalytic activities, RSC Adv., 2021, 11, 28029 (IF: 4.036)
2. Sharat Sarmah, **Upasana Hazarika**, Sony Moni Das, Sana Quraishi, Anindita Bhatta, Vinay Kumar Belwal, Anupam Nath Jha, Atanu Singha Roy; Deciphering the interactions of phytochemicals with ovalbumin, the major food allergen from egg white: spectroscopic and computational studies, Luminescence. 2022;1–18. (IF: 2.613)
3. Sona Lyndem, **Upasana Hazarika**, Athul P, Anindita Bhatta, Vivek Prakash, Anupam Nath Jha, and Atanu Singha Roy; A comprehensive in vitro exploration into the interaction mechanism of coumarin derivatives with bovine hemoglobin: Spectroscopic and computational methods, Journal of Photochemistry & Photobiology, A: Chemistry 436 (2023) 114425 (IF: 5.141)
4. Sona Lyndem, **Upasana Hazarika**, Anindita Bhatta, Vivek Prakash, Anupam Nath Jha, and Atanu Singha Roy; In vitro Interactions of Esculin and Esculetin with Bovine Hemoglobin alter its Structure and Inhibit Aggregation: Insights from Spectroscopic and Computational Studies, New Journal of Chemistry (2023) (IF: 3.925)
5. Zaved Hazarika, **Upasana Hazarika**, Babli Sharma and Anupam Nath Jha; Importance and Potential Applications of Nanobiotechnology and Systems Biology for Livestock Science (under review, BenthamBooks - Bentham Science Publishers)
6. Bipradip Chakraborty, **Upasana Hazarika** and Nirab C Adhikary; Electronic and optical properties of SnS₂/MoS₂ and SnS₂/WS₂ heterostructure: A DFT and MD study (under review, PANE2022 proceeding)

Abstract Submitted

1. Chayanika Devi, **Upasana Hazarika**, Mrinal K Devnath, Manash Barthakur, Kamal Sarma, Pankaj Kalita; RBC oxidative stress is affected by Size specific Gold NanoParticle in a time and Dose dependent Exposure. (Submitted to Bulletin of Material Science, Impact factor: 1.264, ISSN NO : 0250-4707)
2. **Upasana Hazarika**, Kamal Sarma, BK Dev Choudhury, Pankaj Kalita; 'Synthesis of a plant based green gold nanoparticle and it's *in vitro* PBMC cytotoxicity by hemolytic potentiality test'; (Submitted to ICABET 2020 proceeding by SPRINGER, Scopus indexed)
3. **Upasana Hazarika** and Anupam Nath Jha; Comparative network topology analysis of important pathways of *Leishmania donovani* to explore novel therapeutic targets. (Submitted to ICEACBS2023)

Award and Achievements

- ❖ Achieved Best Poster Presentation Award at TEQIP-III sponsored National Conference, RAAS'2019 held at Guwahati University, Assam, India.
- ❖ Secured 1st position in Poster presentation and 2nd position in senior level quiz competition on world environment day 2018 organized by centre for environment education, Assam.
- ❖ Got "Ishan Uday" Special Scholarship Scheme for North Eastern Region, 2014-15 (selected for top 10000 student of that year on the basis of HS result)
- ❖ Placed in the top 50 projects of Assam in 17th state level National Children's Science Congress 2009 and signified as a child scientist.

- ❖ Selected for Bijnan Jyoti Jatra by Assam Science Technology and Environment Council, Dept of Science and Technology, Govt of Assam by placed in top 50 best projects by child scientist and achieved 3rd prize in painting. (2009, state LEVEL)

Other Qualifications

- **PGDCA AICS**, Mangaldai, Assam, 7Apr'16 to 7Apr'17, A Grade, 87%
- **Ankan Bibhakar** in **Painting**, Bangiya Sangeet Parishad, Calcutta, 2011-12 (Dur: 8 years) 1st class
- **Prabin** in **HINDI**, Assam Rastrabhasha Prashar Samiti, Guwahati, 2012, (Dur: 6 years), 2nd class
- **Nartan in Satriya Dance**, 2nd year, Sangeet Satra Parikhya Parishad, Guwahati, 2009-10, (Dur: 4 years), 2nd class

Activities and Societies

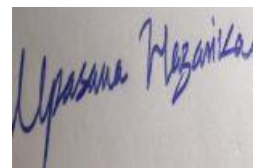
- Class representative of school and College for 15 long years.
- Editor of 1st wall magazine of Biophysics Department "GENESIS" as **Magazine Secretary** 2018-2019, Pub Kamrup college, Kamrup.

PERSONAL INFORMATION

Name : Upasana Hazarika
Father's Name : Pulin Hazarika
Mother's Name : Hira Hazarika
Date of Birth : 25-03-1996
Nationality : Indian
Religion : Hindu
Language known : English, Hindi, Assamese
Interests : Teaching, Poetry Writing, Reading, Cooking,
Gardening, Playing Violin, Fine arts.

DECLARATION

I hereby declare that all the statements made in this format are true and correct to the best of my knowledge and belief.



(Upasana Hazarika)