

# Antara Mukhopadhyay, Dr.rer.nat.

**Pronouns:** She/her

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**Researcher unique identifier:** ORCID 0000-0002-4517-5803

**GitHub:** github.com/antaramukhopadhyay

**Website:** antaramukhopadhyay.github.io

**Research interests:** Single-molecule imaging, super-resolution microscopy, structural biology, molecular biology

## EDUCATION

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- 01/2019-  
12/2022    **Ph.D. in Biology (expertise in biophysics)**, University of Freiburg  
**Supervisor:** Dr. Maximilian H. Ulbrich  
**Thesis:** Multicolor subunit counting method for deciphering membrane receptor stoichiometry.
- 08/2016-  
06/2018    **M.Tech. in Biotechnology (specialization: medical and nanobiotechnology)**, Indian Institute of Technology, Mandi  
**Supervisor:** Prof. Prosenjit Mondal  
**Thesis:** Development of a photostable AIE luminogen for rapid detection of lipid droplets in live cells.  
**Secondary project:** The effect of aliphatic chain modification of NIR fluorescent dyes using albumin si-RNA in live cells.
- 08/2012-  
06/2016    **B.Tech. in Biotechnology**, Heritage Institute of Technology  
**Supervisor:** Prof. Dipankar Chaudhuri  
**Thesis:** Inhibition of *Neisseria meningitidis* sialic acid synthase by a tetrahedral intermediate analog using structure-based drug designing (using AutoDock and Schrödinger).

## LIST OF PUBLICATIONS

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- Yu, C., Runge, H. F. P., **Mukhopadhyay, A.**, Zolles, G., & Ulbrich, M. H. (2023).  $\gamma$ -2 and GSG1L bind with comparable affinities to the tetrameric GluA1 core. Cellular & molecular biology letters, 28(1), 54. <https://doi.org/10.1186/s11658-023-00470-9>
- Biswas, B., Dey, G., Dogra, S., **Mukhopadhyay, A.**, Chowdhury, S. R., Mondal, P., & Ghosh, S. (2019). Molecular Scale Optimum Hydrophobicity To Establish an Enhanced Probe-Protein Interaction: Near-Infrared Imaging of Albumin Biosynthesis Modulation. ACS applied bio materials, 2(8), 3372–3379. <https://doi.org/10.1021/acsabm.9b00362>
- Mukhopadhyay, A.**, Mondal, P. (2018). Application of Nano-biotechnology for Improvement in Therapeutic Approaches for the Treatment of Diabetes. J Clin Mol Endocrinol 3:2.

## CONFERENCE PRESENTATIONS (POSTER)

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- Yu, C., **Mukhopadhyay, A.**, Ulbrich, M. H. (2021). Stoichiometry of GluA1/GluA2 heteromer of AMPA Receptor. DOI: 10.1016/j.bpj.2020.11.580 (Biophysical Society Annual Meeting-2021).

- **Mukhopadhyay, A.**, Ulbrich, M. H. (2022). Dual color subunit counting method to decipher membrane receptor stoichiometry. (German Biophysical Society Meeting-2022).

## TECHNICAL SKILLS

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- Fluorescence microscopy
  - TIRF
  - Confocal
  - Widefield
- Molecular biology techniques
  - DNA and RNA preparation
  - Cloning
    - PCR
    - Gibson assembly
    - Restriction digestion
  - Gel electrophoresis
- Animal handling (certificate: FELASA function A, formerly category B)
- Animal cell culture
- DNA transfection
- RNA injection
- Programming languages
  - C
  - Python
  - Mathematica
  - R, Perl, MATLAB, and LabVIEW (elementary level)
- Web design languages
  - HTML
  - CSS
  - JavaScript (elementary level)
  - PHP (elementary level)
- Image and data analysis software
  - Image J
  - GraphPad Prism
  - Origin
  - CorelDRAW
  - ChemDraw

## SOFT SKILLS

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|------------------------|------------------------|-----------------------------------|
| 1. Communication       | 2. Perseverance        | 3. Work ethic                     |
| 4. Resilience          | 5. Analytical thinking | 6. Open to constructive criticism |
| 7. Presentation skills | 8. Smart working       | 9. Autodidactic                   |

## LANGUAGE SKILLS

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- Bengali (native)
- English, Hindi (professional proficiency)
- Deutsch, Sanskrit, Marathi (elementary proficiency)

## SCHOLARSHIPS, AND OTHER ACTIVITIES

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- Teaching assistant (IIT, Mandi; 2017-2018)
- GATE scholarship for master's study (2016-2018)
- IAS-INSANA-SASI Summer Research Fellowship (June-August'2015)
- West Bengal Higher Education Merit Scholarship (2012-2013)
- State Bank of India Merit Scholarship (2003-2016)