

Antara Mukhopadhyay, Dr.rer.nat.

Pronouns: She/her

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

GitHub: github.com/antaramukhopadhyay

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

EDUCATION

01/2019- **Ph.D. in Biology (expertise in biophysics)**, University of Freiburg

12/2022 **Supervisor:** Dr. Maximilian H. Ulbrich

Thesis: Multicolor subunit counting method for deciphering membrane receptor stoichiometry.

08/2016- **M.Tech. in Biotechnology (specialization: medical and nanobiotechnology)**, Indian Institute of
06/2018 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- **B.Tech. in Biotechnology**, Heritage Institute of Technology

06/2016 **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

- Yu, C., Runge, H. F. P., **Mukhopadhyay, A.**, Zolles, G., & Ulbrich, M. H. (2023). γ -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)

- 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

- 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. Time management | 3. Work ethic |
| 4. Problem-solving | 5. Analytical thinking | 6. Open to constructive criticism |
| 7. Presentation skills | 8. Smart working | 9. Autodidactic |

LANGUAGE SKILLS

- Bengali (Mother tongue)
- English, Hindi (Professional proficiency)
- Deutsch, Sanskrit, Marathi (Elementary proficiency)

SCHOLARSHIPS, AND OTHER ACTIVITIES

- 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)