

# Aromita Mallik

PhD student in Genetics, Molecular and Cellular Biology – University of Pavia

Thesis Title: Novel Molecules in Glioblastoma Therapy

Supervisor: Dr. Sergio Comincini

Reviewer: Dr. Donata Orioli; Dr. Natalia Simona Pellegata

## **EDUCATION**

Masters in Molecular Biology and Genetics – University of Pavia (2021-2024)

110 cum laude /110

Bachelors in Zoology (Honours) – University of Calcutta (2015-2018)

70.0%

Higher Secondary Examination (12<sup>th</sup>) – Patha Bhavan (2015 passout)

83.4%

Secondary Exaamination (10<sup>th</sup>) – Patha Bhavan (2013 passout)

88%

## **RESEARCH AND FIELDWORK EXPERIENCE**

PhD – Department of Biology and Biotechnology, University of Pavia (October, 2024 – ongoing)

- My work deals with Glioblastoma research.

ERASMUS TRAINEESHIP – Department of Anatomy and Cell Biology, Medical University of Vienna (January, 2024- July, 2024)

- I was a part of the current ongoing projects in the department, working with different anatomical, histological and imaging techniques.
- My specific work dealt with postmortem tissue biopsies followed by transcriptomic analysis of the tissue.

EVOLUTION OF THE MILK GLAND PROTEINS GENE FAMILY IN THE TSETSE FLIES – University of Pavia, Italy (October, 2022- September, 2024)

- This project aimed to understand the evolution of the genes responsible for milk production in *Glossina morsitans* and other species of Glossina. I worked with different bioinformatics software to construct phylogenetic trees and understand the molecular evolution of the milk gland protein genes. Finally I detected putative transcription factor binding sites in the regulatory regions of the genes.

**SYSTEMATIC REVIEW AND META-ANALYSIS OF *Neisseria gonorrhoeae* DETECTION METHODS –**  
Institute of Serology: Government of India, Kolkata, 2019

- I gathered secondary data from previous publications within a limited time period for systematic review and performed Meta-analysis utilising Review Manager Software and Microsoft Excel, which was later selected for publication
- I learned diagnostic procedures of different sexually transmitted infections in hands-on training

**OBSERVATION OF ENDANGERED PLANTS AND CONSERVATION METHODS - Acharya Jagadish Chandra Bose Indian Botanic Garden, Kolkata, 2016**

- Observed and tabulated endangered plant species

**FIELD STUDY REPORT ON FOREST ECOSYSTEM AND BIODIVERSITY ASSESSMENT - Lava, Lolegaon, Jaldapara, November, 2016**

- Collected ecological data in the field and species samples including a variety of arthropods and annelids
- Gathered data on the diversity of flora and fauna in the forest by setting up pitfall traps and quadrants for understanding species richness

**COMPUTER AND SOFTWARE SKILLS**

Microsoft Office	Cytoscape	Review Manager	Virtual Machine
Basics of R Programming	RaxmlGUI	CiiDER	Command Line
MUSCLE, MAFFT	FigTree	PAML, EasyCodeML	Primer design

**LABORATORY TECHNIQUES LEARNED**

Culture and staining	Anatomical Dissection	RNA Extraction	DNA Extraction
Agarose Gel Electrophoresis	qPCR	ELISA	Histological slide preparation and staining
Microscopy	cDNA synthesis	Protein Estimation	Statistical Analysis

## **PUBLICATION**

Mallik, A., Das, N., Mukherjee, S., & Datta, S. (2020). A systematic review and meta-analysis of different diagnostic procedures to detect gonococcus infection in resource-limited scenario. *Indian journal of medical microbiology*, 38(3 & 4), 299–306. DOI: [https://doi.org/10.4103/ijmm.IJMM\\_20\\_312](https://doi.org/10.4103/ijmm.IJMM_20_312)

(Under the supervision of Dr. Nibedita Das)

## **WORK EXPERIENCE**

2024 – 6 Months - Medical University of Vienna

- I primarily work with biopsies of postmortem human tissues for thanatotranscriptomic analysis.
- I am working with anatomical, histological and imaging techniques.

2019 – 2 Months - Regional STI Laboratory, Institute of Serology, Kolkata

- My responsibility was to perform a review of the literature and perform a meta-analysis of the data to understand the best method of diagnosis of Gonorrhoea. I learned how to construct a forest plot and use the Review Manager software for the purpose.
- During this time I also received hands-on training of different diagnostic procedures used for STIs including but not limited to culture, immunochromatography, ELISA and PCR.

2020 – 10 Months - Subject Matter Expert (Biology) at Great Champ Technology, Kolkata

- I was an academic writer who was involved in research write-ups and editing academic work. This involved any field of Biological and Health Sciences which enabled me to conduct research and understand a variety of academic frameworks and concepts within a limited period of time.

2020 –Volunteering at Zooniverse and ZSL Instant Wild

- Majority of the projects involved identifying different species of animals via camera trap images and aiding in biodiversity and habitat monitoring of a specific region. This helped me gain knowledge of conservation procedures and species monitoring. I did this remotely during the COVID-19 lockdown.

## **EXTRACURRICULARS**

- Rock climbing
- Marine awareness camp
- Sketching
- Reading