



**ESMANUR MERYEM GEDIK**



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## About me

As a graduate of Molecular Biology and Genetics, I have a deep passion for biology and genetics. I strive to continuously expand my knowledge through academic and applied research experiences. I aim for a research-oriented career where I can contribute to innovative discoveries. I also want to enhance my scientific perspective by connecting with experienced professionals in the field.

## Education

**Istanbul Atlas University**

**2021 - Present**

**Language**

English-B2

**Molecular Biology and Genetics**

## Experiences

### **Intern – Istanbul Aydın University VM Medical Park Florya Hospital - IVF Unit - March 2026 - April 2026**

During my voluntary internship, I gained professional experience by actively observing assisted reproductive techniques, laboratory discipline, and clinical processes. Within the framework of medical ethics and patient confidentiality, I reinforced my academic knowledge with practical experience by learning about current treatment protocols and technological applications in a multidisciplinary work environment.

### **Research Internship – Department of Quantitative Biomedicine, University of Zurich (UZH), Rolf Kümmerli Laboratory, January 2026 – February 2026**

During my volunteer internship, I expanded my academic vision by integrating into a research environment working on bacterial social behaviors (quorum sensing) and evolutionary dynamics, while developing my practical skills in bioinformatics and computational biology by learning to set up independent workflows for the analysis of genomic sequencing data. In this process, I overcame system compatibility issues (e.g., Apple processor limitations) encountered in variant analyses by learning to set up Linux virtual environments on Docker, thus demonstrating my technical problem-solving abilities in practice.

### **Research Internship - Gebze Technical University, Dr. Hüseyin Balcı Laboratory, July 2025 – August 2025**

In the laboratory under the supervision of Dr. Hüseyin Balcı, I gained experience in molecular biology techniques for enzyme production processes from wild-type and recombinant strains. During my internship, I followed genetic modification and cloning workflows (ligation, selection, isolation) end-to-end, combining the theoretical foundations of molecular biology with practical application. I gained technical expertise, particularly in stock solution preparation, optimization of tube reactions, and advanced DNA purification methods, demonstrating my competence in the laboratory aspects of research projects.

### **Research Internship – Aziz Sancar Experimental Medicine Research Institute, Laboratory Animals Unit, June 2025 - July 2025**

Actively involved in the care of laboratory animals, ethical practices, and tissue sampling, experimental design, sample tracking, and laboratory record-keeping processes.

# Research Student – TÜBİTAK 2209-A Project

Istanbul Atlas University 2024 – Present

Project: “In vitro investigation of the effect of chlorotoxin on gastric cancer” Cell culture experiments, data analysis, literature review Gaining practical experience in sterile techniques.

## Research Assistant – Organoid and Drug Discovery Laboratory, Prof. Dr. Fatih Kocabaş Lab - June 2026

The upcoming research project aims to investigate the molecular-level roles of MEIS transcription factors in breast cancer subtypes, particularly their effects on epithelial-to-mesenchymal transition (EMT) processes, cell migration, and metastatic progression, and to functionally analyze these effects using 3D organoid models.

## Social Media and Content Manager and Designer - Atlas Genome Club 2024 - 2026

### Scientific Competencies

- Aseptic techniques
- Site-directed mutagenesis
- Bacterial cultures
- Plant tissue culture
- DNA/RNA/Protein isolation and purification
- Preparation of Competent cell
- PCR types
- Primer design and optimization
- Vaccinations and peeling procedures in bacteria.
- BCA and Bradford Protein Quantity Determination Test
- RFLP (Restriction Fragment Length Polymorphism)
- Affinity Chromatography
- Determination of microorganisms and chloroplasts by spectrophotometric analysis
- Disk Diffusion test
- Gel electrophoresis
- SDS-PAGE
- Karyotype analysis
- Enzyme Immobilization
- Antibiotic Sensitivity Test
- NCBI and ENSEMBL databases
- PDB, DrugBank, ChEMBL, Yang Zhang Lab
- Molecular docking – basic
- NeuralPLexer – basic
- ModRefine
- Molecular dynamics simulations – fundamentals
- Maestro – basics
- DOG 2.0 – basics
- T-coffee multi-alignment
- C++ – basic level
- Excel
- Gene editing and imaging with ChimeraX
- Bacterial biomass measurement with OD600.
- Serial Thinning and Colony Formation Unit (CFU)
- Gram staining

### Certificates and Seminars

- IUGEN 21st International Molecular Biology and Genetics Winter School
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- IUGEN 21st International Molecular Biology and Genetics Winter School
- BiruniMbgen 6th BIGEN Congress
- BiruniMbgen Epigenetics Symposium
- BiruniMbgen 2nd Cancer Symposium