

ZEYNEP MADRAN | MSC IN BIOLOGY

MOLECULAR AND CELLULAR LIFE SCIENCES

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CORE COMPETENCES

- ✓ Primary human material handling, FACS
- ✓ Organoid culture, co-culture systems
- ✓ PCR, qPCR, primer design
- ✓ Cell culture techniques
- ✓ Transfection, transduction, virus production
- ✓ RNAseq data analysis
- ✓ RNAscope, IF, spatial transcriptomics
- ✓ **Animal handling:** FELASA B certificate
- ✓ **Programming Languages and Databases:** R, Python, Java Treeview, xena browser, GEO2R, IGV, cbioportal, GSEA, BioTuring
- ✓ **Equipment and software:** HALO, EVOS, Axio scanner, image post-processing

EXPERIENCE

Centre de recherche en cancérologie de Toulouse - CRCT

Scientific Intern (lab. MICROPANC, Dr. Bousquet, CRCT) | 2024/04 - ongoing

- Performed extensive library search on cancer associated fibroblast culture/co-culture techniques to apply in the future.
- Practiced cell culture methods listed and familiarized with novel imaging equipment (videomicroscopy etc.)
- Continued RNAscope/IF image analysis and quantification, as well as single cell transcriptomic data for assessment of cancer associated fibroblast subtypes and expression of SLIT/ROBO members.

The Visual & Spatial Tissue Analysis (VSTA) core facility (Vrije Universiteit Brussels)

Scientific Intern (collab. with Dr. Bousquet, CRCT) | 2023/10 - 2024/01

- Performed RNAscope and IF stainings, as well as analysis of single cell spatial profiling data and analysis of results to see relations of tumors with their microenvironments with consideration of their subtypes and SLIT/ROBO expression profiles.

Vrije University Brussels, Brussels/BELGIUM

Scientific Intern (LMMO, Dr. Rooman) | 2023/07 - 2023/09

- Was in charge of laboratory maintenance.
- Worked on various projects of members of the laboratory. Tasks included imaging, cell culture work, data analysis, FACS etc.
- Handled primary human pancreas samples.

Vrije University Brussels, Brussels/BELGIUM

Scientific Intern (LMMO, Dr. Rooman) | 2022/09 - 2023/06

- **"First Characterization of Pancreatic Basal Cells in Healthy and Chronically Inflamed Human Pancreas"**
- Independently performed experiments applying various cell culture techniques and imaging, handled primary human samples, and analyzed the data produced.
- Carried out comprehensive research throughout the project, regularly presented results.

Middle East Technical University, Ankara/TURKEY

Intern | 2020/11 - 2021/06

- **"Understanding the Role of Epigenetic Regulation in Meningioma Chemoresistance"**
- Performed data collection from various databases (ENCODE, cbioportal, JASPAR) and analysis of raw sequencing data obtained from experiments using R programming (heatmap, volcano plot etc.).
- Performed extensive research on the given cancer type, the gene, and the related epigenetic changes.
- **"Understanding the Role of Hypoxia in Meningioma Fatty Acid Metabolism"**
- Handled bioinformatics in the formation of the project by creating plots on RNAseq data.
- Performed library search on the subject, researched associated databases (HypoxiaDB etc.).

Bilkent University, Ankara/TURKEY

Senior Project - completed with highest grade (4.0/4.0) | 2021/01 - 2021/06

- **"In Silico Analysis and Identification of Mutation Factor in Acute Liver Failure"**
- Analyzed large whole exome sequencing data on Microsoft Excel.
- Performed detailed library search on the given disease, common mutations, and possible cures associated with the disease.

Bilkent University, Ankara/TURKEY

Senior Project - completed with highest grade (4.0/4.0) | 2020/09 - 2021/01

- **"In Silico Analysis of Involvement of STK10 Kinase to the Pathophysiology of Breast Cancers"**
- Performed data (expression, mutation etc.) collection from various databases (including cBioportal, Xena browser, ROC plotter, KM plotter) related to given protein/gene.
- Performed detailed library search on the given protein, its substrates, the given cancer type and the associated signaling pathway.
- Performed PCR, DNA/RNA purification, gene cloning, Western Blotting and transfection experiments and research over the course of 4 weeks and documented findings.

Halic University, Istanbul/TURKEY

Intern | 2019/06 - 2019/08

- **"Determining the MIC for Combination Drugs Against Staphylococcus aureus Induced Biofilm"**
- Conducted extensive research and analysis of articles about the topic of research, and was involved in the development of project hypothesis.
- Performed library search of previous findings on the minimum inhibitory concentrations of certain drugs on S. aureus infections, biofilm formation and characteristics of S. aureus.
- Performed preparation and calculation of drug dosages, drug treatments, bacterial culture, preparation of mediums, measurements by spectrophotometry.

Bilkent University, Ankara/TURKEY

Intern | 2018/01 - 2019/08

- **"Identification of Novel miRNAs as Prognostic or Diagnostic Biomarkers for Blood Cancer"**
- Collected data from various databases for miRNAs, cancer drugs of interest and blood cancer genes.
- Researched and interpreted large volumes of scientific data.
- Conducted analyses on Microsoft Excel and Java TreeView and correlated the previously collected data.
- Performed comprehensive library research on the mechanisms and pathways of cancer and their correlation to certain miRNAs.

EDUCATION

Master of Science : Biology / Molecular and Cellular Life Sciences

2021/09 - 2024/01 | Vrije University Brussels

Current GPA: 72% (14.4/20, Distinction)

Ranking not yet available.

Bachelor of Science : Molecular Biology and Genetics

2017/08 - 2021/06 | Bilkent University (CGPA 2.98/4.0)

Active member of the Molecular Biology and Genetics Student Club.

Honor (3.29/4.0 | 2019-2020 Spring) / High Honor (3.68/4.0 | 2020-2021 Spring)

LANGUAGES

- English (C1 IELTS) ●●●●●○
- French (B1 DELF) ●●●○○○
- Turkish (Native) ●●●●●●
- Italian ●○○○○○
- Korean ●○○○○○

REFERENCE

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