



Emre Kara

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● EDUCATION AND TRAINING

2020 – 2025 Istanbul, Türkiye

BACHELOR OF SCIENCE (B.SC.) IN MOLECULAR BIOLOGY AND GENETICS & CHEMISTRY (DOUBLE MAJOR) Istanbul Technical University

I graduated with honors in Molecular Biology and Genetics in 2024, with expertise in Biology, Genetics, Biochemistry, Molecular Biology, Biophysics, Evolution & Ecology, Statistics, and Computational Biology, along with advanced lab techniques like PCR and Western Blot.

Pursuing a **double major**, I started Chemistry in 2022 to deepen my understanding of its applications in biology. I will graduate in spring 2025 and am currently writing my thesis.

Final grade Molecular Biology and Genetics 3,34/4 (4 is the best) - Chemistry 3.19/4 (4 is the best) | **Level in EQF** EQF level 6 |

Thesis Molecular Biology and Genetics: Stress Responses in *Schizochytrium* sp. S31 and *Rhodotorula glutinis*. - Chemistry: Investigation of binding affinities of anti-cancer ligands with KRAS G12C protein by molecular docking.

● RESEARCH EXPERIENCE

16/06/2023 – 19/09/2023

ERASMUS+ INTERN

Friedrich Miescher Laboratory of the Max Planck Society

As an Erasmus+ student at the Max Planck Institute Friedrich Miescher Laboratory, my three-month internship on “Evolutionary Genomics of Complex Traits” encompassed valuable hands-on experience in *Drosophila* research, gaining experience in population genetics, molecular biology, phenotyping, and statistical analysis. I also gained proficiency in computer science, particularly in RStudio. This immersive experience broadened my skill set significantly for future endeavors.

01/02/2024 – 01/08/2024

TUBITAK STAR INTERN

Eurasia Institute of Earth Sciences

As a STAR intern at the Scientific and Technological Research Council of Turkey (TÜBİTAK) in the Eurasia Institute of Earth Sciences, I contributed to the project titled “Anatolian Sister Taxa: Comparative Population Genomic Analysis of Secondary Contacts of Sister Bat Taxa in Anatolia” for six months. During this internship, I learned both pre- and postgenomic analysis procedures using the National Center for High-Performance Computing. Additionally, I gained familiarity with Unix and Bash scripting.

02/08/2024 – 13/10/2024

ERASMUS+ INTERN

Friedrich Miescher Laboratory of the Max Planck Society

As a second-time Erasmus+ intern, I contributed to a project on the evolutionary genomics of flight performance in CG5246 gene knocked-out *Drosophila melanogaster*, investigating wing morphology and locomotor behavior. Conducted morphological measurements, functional and behavioral phenotypic assays, and statistical analyses in R, providing insights into genetic variation and adaptation.

02/08/2024 – 13/10/2024

ERASMUS+ INTERN

Max Planck Institute for Biology

Worked on a project applying Expansion Microscopy (ExM) to ciliate cells to enhance imaging resolution for cellular structures. Gained expertise in sample preparation, imaging techniques, and image analysis, contributing to improved visualization of organelles in single-cell organisms.

● PUBLICATIONS

2025

Kara E., Şahin D., "Investigating Stress Responses in Schizochytrium sp. S31 and Rhodotorula glutinis: Effects of High Salt, Consortia, and Microplastics (PET) on Cell Density and Fatty Acid Composition" (2025).

It is an ongoing study advised by Assoc. Prof. Deniz Şahin, and currently we are in the writing process.

● SKILLS

Python | MATLAB | PyMOL | Unix | Bash (scripting) | R, RStudio | Beginner HTML/CSS | Linux (Terminal Commands, Bash/Shell) | LaTeX: used for documents preparation (e.g. reports and presentations).

● CONFERENCES AND SEMINARS

Istanbul

International ITU MBG Student Club Congress

I served as a Board Member of the ITU Molecular Biology and Genetics Student Club for two years, where I was involved in organizing the 15th and 16th International ITU MBG Student Club Congresses.

13/01/2025 – 14/01/2025 Istanbul

ITU EELISA European University New Horizons in Technology Diplomacy: Challenges, Opportunities, Future Strategies

At Istanbul Technical University, the only member of the European University EELISA from Turkey, I attended this conference.

● TALKS AND POSTERS

12/2022

How to Pursue a Double Major?

I gave a talk on pursuing a double major, discussing its advantages and disadvantages, at the ITU MBG Student Club.

03/2024

Evolutionary Genomics of Complex Traits

I presented my summer internship at the Friedrich Miescher Laboratory of the Max Planck Society, where I studied flight performance and phenotypic variation in *Drosophila melanogaster*, at the ITU Journal Club's Academy meetings.

12/2024

Evolutionary Genomics of Complex Traits (Morphometrics Analysis of *Drosophila* Wings)

I gave a second talk at the ITU Journal Club's Academy meetings, presenting my second summer internship at the Friedrich Miescher Laboratory of the Max Planck Society, where I studied wing morphology and fluctuating asymmetry in *Drosophila melanogaster*.

12/2024

How to Apply for Erasmus+ Internship

I gave a short talk at the ITU Journal Club, where I shared my experiences during the Erasmus+ program. In addition, I provided insights on how to apply for Erasmus+, find a suitable laboratory, and meet the necessary requirements.

● HONOURS AND AWARDS

2015

The Ministry of National Education Scholarship – The Ministry of National Education of Turkish Republic

Success scholarship of the Ministry of National Education during my high school education for my basic requirements.

2019

General Directorate of Credit and Dormitories Scholarship – General Directorate of Credit and Dormitories of Turkish Republic

I received the General Directorate of Credit and Dormitories scholarship during my university education for 4 years with a total of 53.000 TL.

16/06/2023

Erasmus+ Grant – Istanbul Technical University

I received a total of 2400 Euro grant from Istanbul Technical University to support my research at the Max Planck Institute for Biology. This grant aims to cover housing for the students with the best GPA and to do research abroad for up to 3 months.

02/2024

Scientific and Technological Research Council STAR Scholarship – Scientific and Technological Research Council of Turkey

Scientific and Technological Research Council Scholarship aims to support students to conduct research for 6 months.

01/08/2024

Erasmus+ Grant – Istanbul Technical University

I received a grant for my second Erasmus+ internship at the Max Planck Institute for Biology to support my 2,5 months of internship with a total of 1725 Euro.

● **SERVICE AND OUTREACH**

Author at Ari24

Ari24 is the student media platform of Istanbul Technical University (ITU). As a writer for two years, I reported on university-related events, aiming to enhance communication among students.

Member of TEMA Foundation

I am a member of the TEMA Foundation, a leading Turkish environmental organization dedicated to combating soil erosion, promoting afforestation, and advocating for sustainable environmental policies.

Member of Turkish Society of Biologists

I have been an active member of the Turkish Society of Biologists for over two years, regularly attending events, presentations, and scientific discussions.

● **LANGUAGE SKILLS**

Turkish (Native)

English (Proficient, Level C1)

German (Basic, Level A1)

● **MANAGEMENT AND LEADERSHIP SKILLS**

Co-founder of Beeology

I served as a Co-founder and the General Editor of Istanbul Technical University's only biology journal Beeology for three years, during which I successfully launched the first issue.

● **COMMUNICATION AND INTERPERSONAL SKILLS**

Author at DijitalX

As a science writer with three years of experience, I have authored over twenty scientific writings for DijitalX, a platform dedicated to science communication. My work has over 180,000 views.