

# Ece Inal Eryegit

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## SUMMARY

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- Research assistant in the department of Molecular Biology and Genetics at IZTECH, studying cell biology, connexins, epidermal homeostasis, connexin-related diseases, and the underlying molecular pathways.
- Research interests are cellular communication, epidermal health and disease, including skin cancer, with a focus on signaling pathways and their implications in disease progression.

## EDUCATION

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MSc in Molecular Biology and Genetics, Faculty of Science, Izmir Institute of Technology 2021 – 2024

- GPA: 3.86/4.0
- Advisor: Prof. Dr. Gulistan Mese Ozcivici

BSc in Molecular Biology and Genetics, Faculty of Science, Izmir Institute of Technology 2016 – 2021

- The President's Honor's List (*GPA: 3.32/4.0*)

## RESEARCH & WORK EXPERIENCE

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**Research Assistant** 2024 – Present

Mese Ozcivici Lab, Dept. of Molecular Biology and Genetics, Faculty of Science, Izmir Institute of Technology

- Member of the Faculty of Science Quality commission; contributed to the accreditation process by The Association for Evaluation and Accreditation of University Programs in Mathematical, Natural, and Social Sciences (FEDEK)

**Graduate Research Student** Sep 2021 – Apr 2024

Mese Ozcivici Lab, Dept. of Molecular Biology and Genetics, Faculty of Science, Izmir Institute of Technology

- Conducted MSc thesis research on “The Investigation of the Role of NF- $\kappa$ B in the Proliferation and Differentiation of HaCaT Cells Containing Cx26 KID Syndrome Mutations”.
- Applied techniques: Mammalian cell culture, molecular biology techniques (qRT-PCR, Western blot, immunostaining), cell viability assays (MTT, BrdU, cell cycle and apoptosis analysis), functional assays to assess hemichannel and gap junctional activity (dye uptake and scrape loading).
- Managing laboratory operations: maintaining records, organizing reagents and supplies, and handling lab orders.

**Molecular Biologist, Part-time** Sep 2020 – Aug 2021

R&D Department, Genometri Biotechnology R&D and Consulting Services Ltd., Izmir, Turkey

**Summer Intern** July 2020 – Sep 2020

R&D Department, Genometri Biotechnology R&D and Consulting Services Ltd., Izmir, Turkey

- Participated in ongoing R&D projects of the company, including viral studies and development of disease-detecting kits. Performed Sanger sequencing of PCR samples for a collaborative project.
- Learnt skills are conventional & qRT-PCR, agarose gel electrophoresis, nucleic acid isolation, Sanger sequencing.

## Summer Intern

Aug 2019 – Sep 2019

Kamiyama Lab, Dept. of Cellular Biology, University of Georgia, Athens, Georgia, USA

- Research on neuronal communication, focusing on the roles of axons, dendrites, and synapses.
- Maintenance of Drosophila cages, immunostaining and confocal imaging of Drosophila embryos.

## PUBLICATIONS

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Yasarbas, S. S., **Inal, E.**, Yildirim, M. A., Dubrac, S., Lamartine, J. & Mese, G. (2024). Connexins in epidermal health and diseases: insights into their mutations, implications, and therapeutic solutions. *Frontiers in physiology*, 15, 1346971. URL: <https://doi.org/10.3389/fphys.2024.1346971>

Cagan-Algan, M., Anil-Inevi, M., Kecili, S., **Inal, E.**, Tekin, H. C., Mese, G. & Ozcivici, E. (2025). Negative magnetophoresis guided unidirectional cell patterning on culture surface. *Biomedical Engineering Advances*, 9, 100169. URL: <https://doi.org/10.1016/j.bea.2025.100169>

**Inal, E.**, Yildirim, M. A., & Mese, G. (2025). Assessing Hemichannel and Gap Junctional Channel Activities in HaCaT Keratinocyte Cells. *Methods in molecular biology (Clifton, N.J.)*, 10.1007/7651\_2025\_650. Advance online publication. URL: [https://doi.org/10.1007/7651\\_2025\\_650](https://doi.org/10.1007/7651_2025_650)

## PRESENTATIONS

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**Poster presentation** – “The Role of NF-κB in the Proliferation and Differentiation of HaCaT Cells Containing Cx26 KID Syndrome Mutations”, presented at the 9th International Congress of the Molecular Biology Association of Turkey, Izmir, Turkey, September 2024

**Oral presentation** – “Investigation of the Role of NF-κB Pathway in the Epidermal Phenotypes Observed in KID Syndrome Caused by Connexin26 Mutations”, presented at the International Symposium Series on Graduate Research 2022, Izmir, Turkey, November 2022

## TEACHING EXPERIENCES

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**Teaching Assistant**, Cell Biology Laboratory Course 2024 – Present

Dept. of Molecular Biology and Genetics, Faculty of Science, Izmir Institute of Technology

- Assisted undergraduate students with laboratory experiments for the Cell Biology Lab course (MBG211), including instruction on protocols and data analysis.

**Mentor**, Research Project Course 2021 – Present

Dept. of Molecular Biology and Genetics, Faculty of Science, Izmir Institute of Technology

- Trained and supervised junior and senior students on molecular biology research projects for MBG351 & 451 courses.

## SCHOLARSHIP

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BİDEB 2210 National MSc Scholarship Program 2022 – 2024

- Competitive national scholarship awarded by the Scientific and Technological Research Council of Turkey (TÜBİTAK) to outstanding graduate students in Turkey.

## EXTRACURRICULAR ACTIVITIES

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**International volunteer**, Agape Centro Ecumenico, Turin, Italy

July 2017 – Aug 2017