FATMA BETUL DINCASLAN

Looking for post-doc opportunities in computational biology and bioinformatics for 2024.

💻 RESEARCH EXPERIENCE

2019-2023

NUS Research Scholar (Currently)
Biomedical Engineering, NUS (Supervisor: Lih Feng CHEOW)

📍 Singapore

• Development of single cell high throughput assays/protocols for 1) total RNA sequencing and 2) multiomics profiling of secreting cells.

2016 | 2019

Master Student
MBG, Bilkent University (Supervisor: Ozlen KONU)   📍 Ankara, Turkey

Tissue Specific Transcriptome of Zebrafish in AChE Mutant Embryos

• I analyzed tissue specificity (TS) of zebrafish, considering the dynamicity of gene expression, by using specific metrics such as Tau, Tsi. I compared the outcome of different normalization methods on TS discovery as well. Then I applied the TS analysis on publicly available mutant zebrafish embryos datasets. I performed qPCRs for in vivo confirmations after isolating the RNAs. I further investigated the relationship between ache and the retinal genes by using the tools like Gene Onthology (GO).

Role of AChE as a tumor suppressor together with p53

• My role was to bred appropriate zebrafish lines, dissect, genotype the fish tissues and embed them in OCT.

Identification of peridodontis disease related genes (collaboration w/Dentistry Department of Ankara University)

• I assisted the dentistry students.

Role of mineralocorticoid receptor in breast cancer

• My roles in the wet lab part were RNA isolation and qPCR; for the dry lab, making a pipeline with Seven Bridges CGC and available R packages for RNA-Seq data analysis, and data visualization.

💻 TEACHING AND ASSISTANSHIPS

2017 - present

Mentor, Bilkent and NUS
Have been mentoring different undergrad students since grad school.

📍 Earth

2020 | 2022

BN2301 Fundamental Biochemistry and Biomaterials for Bioengineers, NUS
Teaching Assistant

📍 Singapore

CONTACT INFO

✉ fatmab.dincaslan@gmail.com

in linkedin.com/fbdincaslan

researchgate.com/dincaslan

🐙 github.com/dincaslan

Ⓜ medium.com/dincaslan

For more information, please contact me via email.

SKILLS

NGS data analysis (previous: bulk, recent: single).

Common bioinformatics tools such as NCBI, Blast, UCSC Genome Browser, Ensembl, Expression Atlas, Primer Design tools, STRING, GO/Panther, and cloud such as Seven Bridges Cancer Genomics Cloud. Currently improving Ubuntu skills to use HPC/Server systems.

Skilled in R.

Wetlab basics such as rna-dna isolation, qPCR, cell culture. Model organisms: zebrafish. Currently practicing sequencing.

2017 | 2018

MBG326 Introduction to Bioinformatics, Bilkent University
Teaching assistant for introduction to bioinformatics and R programming

📍 Ankara, Turkey

2018

MBG302 Molecular Biology of The Cell-II, Bilkent University
Teaching assistant for the cell culture experiments from cell opening, passaging to scratch assay, kinase inhibition and crystal violet assays.

📍 Ankara, Turkey

2017

MBG223 Molecular Genetics, Bilkent University
Teaching assistant for molecular cloning experiments from plasmid editing, restriction enzyme digestion, and ligation to miniprep.

📍 Ankara, Turkey

🎓 EDUCATION

2019 | 2023

PhD Student, Biomedical Engineering
I am currently working on two different projects regarding the single cell sequencing and its application on microfluidics systems

📍 NUS, Singapore

2017 | 2019

M.Sc., Molecular Biology and Genetics
Thesis: Tissue Specific Transcriptome of Zebrafish in AChE Mutant Embryos

📍 Bilkent University, Ankara, Turkey

2011 | 2016

B.Sc., Molecular Biology and Genetics
(First year is English Prep School) 📍 Bilkent University, Ankara, Turkey

🎗 AWARDS AND HONOUR

2019 | 2023

NUS Research Scholarship
NUS Biomedical Engineering

📍 Singapore

2022

eLife Ambassador
Trainee of "learning and community-building"

📍 Earth

2019

Graduated with High Honour for MSc Degree
Bilkent University Molecular Biology and Genetics 📍 Ankara, Turkey

2020 - present

ISCB Student Council Active Member
Virtual seminars (webinar) team

📍 World

2018 - present

ISCB-RSG Student Council Turkey
Previously social media and website content team, now Med&Omics

📍 Turkey

2016

Graduated with Honour for BSc Degree
Bilkent University Molecular Biology and Genetics 📍 Ankara, Turkey

2011- 2016

Comprehensive Scholarship
Awarded by Bilkent University

📍 Ankara, Turkey

♟ OTHER INTERESTS

- • Sports: Playing Basketball and Chess, Running
- • Art: Charcoal
- • Other: Data science, statistics shared by Conrad Hacketts, World Economic Forum, Economics and Forbes Magazine.

📄 SELECTED PUBLICATIONS AND POSTERS

- • Lessons from a ten-year-long journey: building a student-driven computational biology society across Turkey

Yasin Kaya, Tülay Karakulak, Cemil Can Saylan, E. Ravza Gür, Engin Tatlıdil, Sevilay Güleşen, **Fatma Betül Dinçaslan**, Handan Melike Dönertaş

F1000Research, DOI: 10.12688/f1000research.107886.1

- • Functional analysis of co-expression networks of zebrafish ace2 reveals enrichment of pathways associated with development and disease

Ayse Gokce Keskus, Melike Tombaz, Burcin Irem Arici, **Fatma Betul Dincaslan**, Afshan Nabi, Huma Shehwana, and Ozlen Konu

Genome, DOI: 10.1139/gen-2021-0033

- • A pipeline for examination of tissue-specificity of differentially expressed genes in zebrafish mutants: Application to AChE mutants

Fatma B. Dincaslan, Afshan Nabi, M. Efe Isilak, Ayse G. Keskus, M. Ender Avci, Michelle M. Adams, Ozlen Konu

Poster for International Symposium on Health Informatics and Bioinformatics (HIBIT) (2018, Antalya, Turkey)