



FATMA BETUL DINCASLAN

RESEARCH EXPERIENCE

2019-
2023

- **NUS Research Scholar (Currently)**
Biomedical Engineering, NUS (Supervisor: Lih Feng CHEOW)  Singapore
 - Development of single cell high throughput assays/protocols.

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. Then I applied the TS analysis on the mutant zebrafish embryos by using the publicly available datasets. I compared the effect of using different normalization methods on TS discovery as well. 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 Ontology (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 periodontitis disease related genes (collaboration w/Dentistry Department of Ankara University)

- I assisted the dentistry students to perform both wet lab and bioinformatics analysis.


Role of mineralocorticoid receptor in breast cancer

- My roles in the wet lab part were RNA isolation and qPCR; for the dry lab, development of easy to use pipeline with Seven Bridges CGC and available R packages for RNA-Seq data analysis, and data visualization.

2015 Fall

- **Investigation of allergen specific immunotherapy on patients with bee-venom allergy**
Bilkent University - Supervisor: Ihsan GURSEL  Ankara, Turkey
 - I experienced PBMC isolation

2015
Summer

- **The relationship between some of Mesp family genes and other known somitogenesis genes in zebrafish vertebrae development**
Albert Einstein College of Medicine - Supervisor: Ertugrul OZBUDAK  NY, USA
 - I did lots of in situ hybridization experiments with zebrafish embryos to study somitogenesis.



CONTACT INFO

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 [researchgate.com/dincaslan](https://www.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
system such as Seven Bridges
Cancer Genomics Cloud. Currently
improving Linux skills to use
HPC/Server systems.

Skilled in R.

MBG wetlab skills such as model
organisms: zebrafish, rna-dna
isolation, qPCR, in-situ
hybridization, cell culture. Currently
practicing sequencing.



TEACHING AND ASSISTANTSHIPS

- 2020 • **BN2301 Fundamental Biochemistry and Biomaterials for Bioengineers, NUS**
Teaching Assistant 📍 Singapore
- 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 • **MBG326 Introduction to Bioinformatics, Bilkent University**
Same above (2018 version) 📍 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
- 2018 | 2019 • **Webpage Assistant**
KONU Lab, Bilkent Zebrafish Facility and Bilkent MBG Websites 📍 Ankara, Turkey



EDUCATION

- 2019 | 2023 • **PhD Student, Biomedical Engineering**
National University of Singapore 📍 Singapore

• I am currently working on two different projects regarding the single cell sequencing and its application on microfluidics systems.
- 2017 | 2019 • **M.Sc., Molecular Biology and Genetics**
Bilkent University 📍 Ankara, Turkey

Thesis: Tissue Specific Transcriptome of Zebrafish in AChE Mutant Embryos
- 2012 | 2016 • **B.Sc., Molecular Biology and Genetics**
Bilkent University 📍 Ankara, Turkey
- 2012 • **English Preparation School**
Bilkent University 📍 Ankara, Turkey
- 2011 • **Mathematics and Science**
Sami Yangin Anatolian High School 📍 Kayseri, Turkey



AWARDS AND HONOUR

- 2019
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2023
- **NUS Research Scholarship**
NUS Biomedical Engineering Singapore
- 2019
- **Graduated with High Honour for MSc Degree**
Bilkent University Molecular Biology and Genetics Ankara, Turkey
- 2020 -
present
- **ISCB Student Council Active Member**
Virtual webinars team World
- 2018
|
present
- **ISCB-RSG Turkey Student Council Active Member**
Social media and website content creator Turkey
- 2016
- **Graduated with Honour for BSc Degree**
Bilkent University Molecular Biology and Genetics Ankara, Turkey
- 2016
- **Writer at Biomedya**
Turkish web-based magazine on synthetic biology and life sciences Turkey
- 2011-
2016
- **Comprehensive Scholarship**
Awarded by Bilkent University Ankara, Turkey



OTHER INTERESTS

- Sports: Playing Basketball and Volleyball
- Art and Music: Charcoal, Reed Flute(Beginner)
- Games: Chess, Checker, Mind games such as Sudoku, Kendoku, Futoshiki.
- Computer related: HTML Fundamentals, CSS Fundamentals, JavaScript Tutorial, PHP Tutorial, SQL Fundamentals, Python 3 Tutorial, C# Tutorial, Ruby Tutorial, Swift 4 Tutorial courses, certificated by SoloLearn
- Other: Data science, statistics shared by Conrad Hacketts, World Economic Forum, Economics and Forbes Magazine.



SELECTED PUBLICATIONS AND POSTERS

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

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

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