FATMA BETUL DINCASLAN

Interested in post-doc/research opportunities in computational biology and bioinformatics

RESEARCH EXPERIENCE

2019 | 2023

NUS Research Scholar (Thesis Submitted)
Biomedical Eng., NUS (Supervisor: Lih Feng CHEOW) Singapore
High-Throughput Total RNA-Sequencing of Single Cells

• My PhD project was about the development of single cell high-throughput assay for total RNA sequencing. The assay could be easily applied on popular platforms like 10X Chromium. Later, I created a pipeline for total RNA-seq data analysis using open-source tools. I validated the assay on different cell lines and Peripheral blood mononuclear cells (PBMCs). Moreover, I worked on a side project to create an assay for multiomics profiling of secreting cells.

2016 | 2019

Master's 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, using specific metrics such as Tau, Tsi. Furthermore, I compared the outcome of different normalization methods on TS discovery. Then, I applied the TS analysis on publicly available datasets of mutant zebrafish embryos. I performed qPCRs for in vivo confirmations after isolating RNA of model zebrafish embryos. I further investigated the relationship between ache and the retinal genes by using the tools like Gene Onthology (GO).

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 | 2022

Mentor, Bilkent and NUS
Mentored different undergrad students since grad school. Earth

2020 | 2022

BN2301 Fundamental Biochemistry and Biomaterials for Bioengineers, NUS
Teaching Assistant (TA) Singapore

2017 | 2018

MBG326 Introduction to Bioinformatics, Bilkent University
TA for introduction to bioinformatics and R programming
Ankara, Turkey

CONTACT INFO

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researchgate.com/dincaslan
github.com/dincaslan
medium.com/dincaslan

For more information, please contact me via email.

SKILLS

Dry-Lab

Common bioinformatics databases/tools such as NCBI, Primer3, UCSC Genome Browser, Ensembl, Expression Atlas, STRING, GO/Panther.

Bulk and Single Cell Transcriptomics Data Analysis using Command Line Tools and R.

Wet-Lab

DNA and RNA isolation, q/PCR.

Cell Culture and FACS basics.

Library Preparation and Illumina Sequencing.

2017 | 2018

MBG223 Molecular Genetics and MBG302 Molecular Biology of The Cell-II, Bilkent University
MBG223 - TA for molecular cloning experiments: plasmid editing, restriction enzyme digestion, ligation and miniprep. MBG302 - TA for the cell culture experiments: scratch, kinase inhibition and crystal violet assays.

Ankara, Turkey

EDUCATION

2019 | 2023

Ph.D. Candidate, Biomedical Engineering
Thesis: Development of an Assay for High-Throughput Total RNA Sequencing of Single Cells

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

ISCB ASCS
Organization team member of Asian Student Council Symposium, #ASCS2022

Asia

2022

eLife Ambassador
Trainee of “learning and community-building” — Earth

2020 | 2022

ISCB Student Council Active Member
Virtual seminars (webinar) team — World

2018 | present

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

Turkey

2011 | 2016

Comprehensive Scholarship
Awarded by Bilkent University — Ankara, Turkey

OTHER INTERESTS

- Playing Basketball and Bullet Chess, Running, Indoor Climbing
- Reproducibility in Science and Open Science
- Data Science, and Blogging about DataViz

PUBLICATIONS AND POSTERS

• High-Throughput Total RNA-Sequencing of Single Cells

Fatma Betul Dincaslan, Lih Feng Cheow

Oral Presentation for jointly hosted CSI-ENS Symposium: Single-Cell Res/volution 2023 (2023, Singapore)

• 1st ASCS: Expanding the ISCB Student Council Symposia to Asia

Aayush Grover, Arsalan Riaz, Syed Muktadir Al Sium, **Fatma B. Dincaslan**, Sanjana Fatema Chowdhury, Gabriel J Olguin-Orellana, R. Gonzalo Parra, Pradeep Eranti

F1000Research, DOI: 10.12688/f1000research.135767.1

• 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)