



# Mustafa Barbaros DÜZGÜN

M. Sc. in Molecular Biology and Genetics

Highly motivated graduate & Fond of curiosity-driven researches in field of biochemistry

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📄 barbaros4014

## COMPUTER SKILLS

GAUSSIAN MD



MATLAB



MS Office Programmes



pDRAW32



PyMOL PDB VIEWER



SigmaPlot: 13



Data Analysis by R Programming



## LANGUAGES

ENGLISH  
*Expert*

SPANISH  
*Beginner*

TURKISH  
*Native or Bilingual*

## TOPICS OF INTEREST

Structure and Function of Insect GPCRs

Insecticide resistance-linked GPCRs

Meta-analysis of cancer-associated genes

## LABORATORY EXPERIENCE

### 📌 Bachelor Thesis Project- Student Researcher

Istanbul Technical University, Department of MBG

11/2010 - 01/2012

*Allosteric Mechanism of Hsp70 / Conserved Linker Effect in Nucleotide Binding Domain*

*Tasks/Techniques*

- ▣ Site-directed Mutagenesis of DnaK-NBD Construct
- ▣ Expression and Purification of NBD and full-length DnaK
- ▣ Steady-state and Transient Kinetics (Kcat, Km and ADP-release constants)
- ▣ Probing the Structure through Limited Proteolysis Technique

### 📌 Student Researcher

Karaguler Lab / Istanbul Technical University, Department of MBG

01/2014 - 09/2014

*Efficient recombinant expression and purification of AQZ protein / Water purification system*

*Contact: Prof. Nevin GÜL KARAGÜLER*

### 📌 Lab Practice and Master Thesis Project

Technical University of Munich, Biotechnology Section (ERASMUS)

09/2014 - 12/2015

*Comparison of Ubiquitin-tagged Grp94 and wt Grp94 with emphasis on steady state kinetics*

*Tasks/Techniques*

- ▣ Building Ubi-Grp94-Ubi Construct through SLIC Technique
- ▣ Expression and Purification (MZB1, wt Grp94 and Ubi-Grp94-Ubi)
- ▣ Enzyme Kinetics Calculations and in vitro assays (EC50, Km, Kcat etc.)

### 📌 TUBITAK 1007 Project Research Assistant

Izmir Biomedicine and Genome Enstitute

*Developing Monoclonal Antibody Based Bisomilars (Cancer Drug mAb)*

*Achievements/Tasks*

- ▣ Mammalian expression plasmid construction
- ▣ Recombinant Mammalian Protein Expression/Immunoglobulin Purification-Downstream Approaches

## 📌 EDUCATION

### Bachelor in Molecular Biology and Genetics

Istanbul Technical University

10/2008 - 06/2012

### Master Degree in Molecular Biology and Genetics

Istanbul Technical University & Munich Technical University (GPA: 3.50)

10/2012 - 01/2016

### PhD Candidate in Molecular Biology and Genetics

Bogazici University

2019 - Present

*Courses*

- ▣ CANCER SIGNALLING LABORATORY

*Istanbul*

### Research Assitance/Teaching Experience

Bogazici University Molecular Biology and Genetics Department

03/2019 - Present

*Courses*

- ▣ BIO106 LAB

- ▣ BIO254 GENETICS LAB

*Istanbul*