

## SİNEM DEMİRKAYA-BUDAK

### Geneticist, Teaching & Research Assistant

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[sinemdemirkayabudak.github.io](https://sinemdemirkayabudak.github.io)

#### Work Experience

- 01.2016 – ongoing

##### **Teaching & Research Assistant, TOBB University of Economics and Technology (TOBB ETU), Ankara, TURKEY**

- Studying effects of several SNPs on an eye disease utilizing DNA isolation techniques (salt-out and using commercial kit) from several sample types including whole blood, PCR/RFLP, real-time PCR and ELISA methods for investigating isolated DNA.
- Researching, ordering and installing lab equipments to a central lab and guiding graduate students for using these equipments.
- Preparing and submitting research projects, consent, ethics and phenotypic forms for projects including human subjects.
- Teaching Molecular Biology and Genetics laboratory and Physics 101 laboratory classes.

- 07.2013 – 09.2013

##### **Intern, Institute of Systematic Botany and Mycology, University of Munich (LMU München), Munich, GERMANY**

- Studying three species of Caricaceae for validating their phylogenetic relationships by utilizing chromosome counting technique (I was acknowledged for my contribution in this publication:  
<http://www.springer.com/br/book/9783658102661>).
- Helping lab technicians with their regular workflow in several studies including sample collection, sample processing for chromosome counting, PCR, agarose gel electrophoresis, and chromosome counting with DAPI staining under fluorescent microscope.

- 10.2014 – 06.2015, 10.2012 – 01.2013

##### **Special Tutor, <http://odevodu.com>, Ankara, TURKEY**

- Tutoring primary and secondary education students in math and science classes.

#### Education

- 01.2016 – ongoing (ends in April, 2018)

##### **Master's Degree, Biomedical Engineering, TOBB University of Economics and Technology (TOBB ETU)**

CGPA: 4.00 / 4.00

- 09.2015 – 01.2016

##### **MSc, Biotechnology, Middle East Technical University (METU)**

GPA: 3.25 / 4.00 – one semester

- 09.2008 – 06.2015

##### **BSc, Molecular Biology and Genetics, Middle East Technical University (METU)**

CGPA: 2.57 / 4.00

- 11.2011 – 06.2015

##### **BSc, Business Administration (Open Education), Anadolu University**

CGPA: 2.65 / 4.00

- 09.2004 – 06.2008

##### **Mathematics and Science, Mehmet Akif Ersoy High School**

Diploma grade: 93.78 / 100

### Oral & Poster Presentations

- **Demirkaya Budak S**, Can Demirdöğen B, Özge G, Mumcuoğlu T. Evaluation of the effect of clusterin rs2279590 single nucleotide polymorphism in pseudoexfoliation syndrome risk and on clusterin protein level in aqueous humor. The 42nd FEBS Congress. September 10–14, 2017. Jerusalem, Israel (Poster presentation). The FEBS Journal. 2017; vol. 284 (S1) 104-392, DOI: 10.1111/febs.14174, P.1.5-054.
- **Can Demirdöğen B**, Yakar G, Göksoy E, **Demirkaya S**, Koçan C, Özge G, Mumcuoğlu T. Relationship between paraoxonase 1 (PON1) promoter (–107T/C) and coding region polymorphisms (192Q/R and 55L/M) and Pseudoexfoliation syndrome. The 42nd FEBS Congress. September 10–14, 2017. Jerusalem, Israel (Poster presentation). The FEBS Journal. 2017; vol. 284 (S1) 104-392, DOI: 10.1111/febs.14174, P.1.5-073.
- **Göksoy E**, **Demirkaya S**, Oflaz S, Özge G, Mumcuoğlu T, Can Demirdöğen B. Analysis of the relationship between PON1 (paraoxonase1) 192Q/R (rs662) polymorphism with pseudoexfoliation syndrome and pseudoexfoliative glaucoma. Erciyes Medical Genetics Days 2017. May 11–13, 2017. Kayseri, Turkey (Poster presentation). Erciyes Medical Journal. 2017; vol 39, Issue 2, PP13.
- **Demirkaya S**, Can Demirdöğen B, Özge G, Mumcuoğlu T. Analysis of the relation between clusterin rs11136000 polymorphism and pseudoexfoliation syndrome. TBD Biochemistry Days. November 2–5, 2016. Sivas, Turkey (Oral presentation). Turkish Journal of Biochemistry. 2016; vol 41(S3), S036.
- **Demirkaya S**, Özge G, Mumcuoğlu T, Can Demirdöğen B. Evaluation of rs11136000 single nucleotide polymorphism of clusterin gene in pseudoexfoliation syndrome risk. The 41st FEBS Congress. 3–8 September 2016 (Poster). The FEBS Journal 283 (Suppl. 1), 2016; pp 375. DOI: 10.1111/febs.13808. P-08.02.5-006. (Abstract published in the FEBS Journal but the poster presentation could not be done because of the cancellation of the congress).

### Achievements & Projects

- University certificates  
METU Certificate of High Honor: 2010 – 2011 Fall Semester  
Anadolu University Certificate of Honor: 2013 – 2014 Spring Semester
- Spring 2014 – Laboratory practices of green microalgae (*Chlamydomonas reinhardtii*) to produce biodiesel from microalgae. Middle East Technical University (METU), Ankara, TURKEY
- Fall 2013 – Physiological and biochemical response to boron toxicity in two barley cultivars (Zafer 160 and Tarm 92). To study the effects of boron toxicity; growth of root and shoot, antioxidant defense mechanism (Ascorbate peroxidase, Catalase, Glutathione reductase), relative water content, proline content, H<sub>2</sub>O<sub>2</sub> content, malondialdehyde content, protein concentration and the pigment concentration are investigated. Middle East Technical University (METU), Ankara, TURKEY
- Summer 2013 – Chromosome counting for three species of Caricaceae – *C. parviflora*, *J. caudata*, *J. heterophylla* – by using classical cytogenetic techniques and DAPI staining. Institute of Systematic Botany and Mycology, University of Munich (LMU München), Munich, GERMANY

### Languages

- Turkish (native)
- English (fluent)

### Laboratory Skills

- Light/Fluorescence Microscope
- PCR/RFLP
- Electrophoresis
- Spectrophotometry
- Real-Time PCR
- DNA isolation from several sample types
- ELISA

### **Computer Skills**

- Python (beginner)
- R programming/RStudio (intermediate)
- Microsoft Office Tools (Word, Excel, Powerpoint, Access – advanced)
- Minitab (Biostatistics Software – good)
- SPSS (Statistics Software – good)
- BRAHMS Software (elementary)

### **Test Scores**

- ALES (Academic Personel and Postgraduate Education Entrance Exam) – 82.80  
ÖSYM – 11.2017
- METU EPE (English Proficiency Exam) – 76.5  
Middle East Technical University – 06.2014
- YDS (Foreign Language Test) – 80 (Class B)  
ÖSYM – 04.2014

### **Seminars & Courses**

- Website Design  
BELTEK – Technical Education Course of Gazi University/Ankara Metropolitan Municipality  
12.04.2010 – 06.06.2010 (72 hours)

### **References**

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