

Res. Asst. Halis Batuhan ÜNAL



Personal Information

Date of Birth: 09.07.1996
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Education

Master of Science (MSc): Başkent University / Department of Molecular Biology and Genetics
Undergraduate (BSc): Başkent University / Department of Molecular Biology and Genetics

Experiences

2023 - **Research Assistant**, Başkent University Department of Molecular Biology and Genetics
2022 - 2023 **Part-Time Intern**, Başkent University Institute of Food, Agriculture and Livestock Development
2020 - 2021 **Part-Time Molecular Biologist**, Genoks Genetic Diseases and Diagnostic Center

Scholarships

2021 – 2022 (2 years) **Master's Student Scholarship**, TÜBİTAK 3501 'Single-Cell RNA Sequencing in *Arabidopsis thaliana* Root Exposed to Boron Toxicity at the Seed and Seedling Stages
2021 – 2023 (2 years) **BİDEB 2210-A**, TÜBİTAK Domestic Graduate Scholarship Program
Başkent University
2021 – 2023 (2 years) Başkent University Fully Funded Scholarship

Research Interests

Molecular Biology, Molecular Farming, Plant Biotechnology, Transgenic Plant Technologies, Plant Tissue Culture, Bulk RNA Sequencing, Omics Technologies, Single-cell RNA Sequencing, Recombinant DNA Technologies, *Nicotiana benthamiana*, *Arabidopsis thaliana*

Experimental Skills

Conventional Molecular Cloning, DNA / RNA Isolation, PCR, RT-PCR, qRT-PCR, Electrophoresis, Agro-infiltration, Protein isolation from plant, SDS-PAGE, Western Blot, RNA-sequencing analysis by using informatic tools (GO, KEGG, PCA etc.), Biochemical analysis (MDA, H₂O₂, Proline, Content of Anthocyanin and Flavonoids, Photosynthetic activity, Catalase), Protoplast Isolation

Projects

Conservation of critically endangered endemic plant *Prangos denticulata* through in vitro propagation and its genetic characterization (**Researcher**)

Publications

Yılmaz, H., Kayihan, C., Ünal, H. B., Yaprak, O., & Aksoy, E. (2023), Single-cell transcriptional profiling in *Arabidopsis* root exposed to B toxicity at seedling stages, bioRxiv, 2023-03

Kayıhan C, Ünal H, Yaprak O, Mutlu S, Tunç M, Yılmaz I. Finding New Putative Genes Having Role in Excess Boron Responsive Mechanism from Probesets Identified as Unknown in Wheat Cultivars. F1000Research, 2022; :19-19. (SCOPUS)

Presentations in Congress

Ceyhun Kayıhan, Emre Aksoy, Doğa Seln Kayıhan, Ümt Barış Kutman, Hals Batuhan Ünal, Oğuzhan Yaprak, Neslhan Yaşar; Physiological and biochemical analyzes in nla mutant *Arabidopsis thaliana* plant under boron toxicity, 25. Ulusal Byoloji Kongresi, 14 July .2023 İzmir / TURKEY. (ORAL PRESENTATION) (NATIONAL CONGRESS)

Tunc Melis V., Unal H. Batuhan & Gokdemir F. Seyma; Genome-wide analysis of GATA Transcription factor family in *Amborella trichopoda*, International Congress of Engineering and Natural Sciences Studies (ICENSS2021), May 07-09 2021 Ankara / TURKEY, Pg:291-302. (ORAL PRESENTATION) (INTERNATIONAL CONGRESS)