

Anil Can ÖNDER

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anilcanonder.github.io

Education

University of Copenhagen

Plant Molecular Sciences
Ph.D. Candidate

2023 – Present
Copenhagen, Denmark

Izmir Institute of Technology

Biotechnology
M.Sc. Degree

2019 - 2022
Izmir, Turkey

Izmir Institute of Technology

Molecular Biology and Genetics
B.Sc. Degree

2013 - 2018
Izmir, Turkey

University of Latvia

Erasmus+ Exchange Student

Spring 2016
Riga, Latvia

UPSC, Swedish University of Agricultural Sciences

Forest Genetics and Plant Physiology
Internship

Summer 2016
Umeå, Sweden

Research Experience

The Persson Lab

Ph.D. Candidate
Ph.D. student, investigating carbon allocation of plants in neighbor detection conditions
Supervisor: [Prof. Staffan Persson](#)

10/2023 – Present
Copenhagen, Denmark

PlantaLab

Postgraduate Researcher
Postgraduate trainee of *C. annuum* seed priming with nanoparticles (nanopriming).
Advisor: [Prof. Alfredo Ambrosone](#)

09/2022 - 02/2023
Salerno, Italy

BioNanoLab

Graduate Researcher
M.Sc. student, investigated biomedical nanoparticle characterization and optimization of nanodispersions.
Supervisor: [Assoc. Prof. Ceyda Öksel Karakuş](#)
Thesis: [Optimizing the dispersion of ceramic nanoparticles and assessing the role of aggregation in mediating biological activity](#)

02/2021 - 07/2022
Izmir, Turkey

The Doğanlar/Frary Lab for Plant Molecular Genetics and Breeding

09/2015 – 02/2017
Izmir, Turkey

Undergraduate Researcher

Undergraduate student, in the project entitled "Development of SNP markers for N gene conferring resistance to Root-Knot Nematodes in Pepper".

Supervisors: Prof. Anne Frary and Prof. Sami Doğanlar

UPSC, The Department of Forest Genetics and Plant Physiology

Summer 2016
Umeå, Sweden

Undergraduate Intern

Summer internee, in the project entitled "Role of Neutral Alkaline Invertases in Aspen Wood Formation".

Supervisor: Prof. Totte Niittylä

Work Experience

University of Copenhagen, PLEN

09/2023 – Present
Copenhagen, Denmark

Teaching Assistant

Teaching assistant at PLEN, Section for Glycobiology.

Türkiye Sağlık Enstitüleri Başkanlığı (TÜSEB), Turkish Ministry of Health

04/2020 - 11/2020
Izmir, Turkey
Istanbul, Turkey

Molecular Biologist

Volunteer molecular biologist and Lab crew leader (both) at İzmir Halk Sağlığı Laboratuvarı, Covid-19 Detection Center (1 April 2020 - 7 July 2020) and İstanbul Dr. Lütfi Kırdar City Hospital, Covid-19 Detection Laboratory (7 July 2020 - 15 November 2020).

Publications & Presentations

Publications

Önder, A. C.; Reyes-Hernández, B. J.; Krahmer, J. Mechanisms of Carbon Allocation to Stem-like Axial Sink Organs. *J Exp Bot* **2026**, 77 (5), 1469–1482. <https://doi.org/10.1093/jxb/eraf466>

Cappetta, E.; Del Regno, C.; Conte, M.; Castro-Hinojosa, C.; Del Sol-Fernández, S.; Vergata, C.; Buti, M.; Curcio, R.; **Onder, A.**; Mazzei, P.; Funicello, N.; De Pasquale, S.; Terzaghi, M.; Del Gaudio, P.; Leone, A.; Martinelli, F.; Moros, M.; Ambrosone, A. An Integrated Multilevel Approach Unveils Complex Seed–Nanoparticle Interactions and Their Implications for Seed Priming. *ACS Nano* **2023**, 17 (22), 22539–22552. doi.org/10.1021/acsnano.3c06172

Onder, A. C.; Tomak, A.; Oksel Karakus, C. Optimizing the Dispersion of Calcium Phosphate Nanoparticles for Cellular Studies Using Statistical Design of Experiments. *Ceramics International* **2023**, 49 (16), 26890–26899. doi.org/10.1016/j.ceramint.2023.05.226

Presentations

Poster Presentation

International Congress of Toxicology 2022

2022
Maastricht, Netherlands

Poster Presentation

Young Researchers Symposium in Plant Photobiology 2024

BEST POSTER AWARD

2024
Utrecht, Netherlands

Skills

Languages: Turkish (Native), English (Proficient), Spanish (Independent), Italian (Independent)

Coding: Front-end web development (HTML, CSS, JavaScript), R (Proficient), Python (Proficient)

Wet Lab: Alcohol insoluble residue extraction, agarose gel electrophoresis, Anthrone assay, bacterial counting techniques, Bradford assay, mammalian cell culture, cell staining techniques, cell viability assays (LDH, MTT, WST-1), column chromatography, Isolation techniques (DNA, RNA, Protein), dynamic light scattering applications, enzymatic activity assays, flow cytometry, Klason lignin, microscopy (bright field, fluorescence), nanoparticle dispersion, PCR techniques (PCR, RT-qPCR), protein purification, restriction digestion and ligation, SDS-PAGE, seed nanopriming, trimethyl derivatization, Updegraff analysis, western blot

Cloning: Blue-white screening, gateway cloning, Gibson assembly, GreenGate cloning, LR cloning, plasmid transformation methods (heat shock, electroporation), sub-cloning, TA cloning

Plant Oriented: Plant growth maintenance (*Arabidopsis*, *Brassica rapa*, *Populus tremula*), plant crossing (*Arabidopsis*), plant phenotyping (*Arabidopsis*, *Brassica rapa*, *Populus tremula*), plant transformation (*Arabidopsis*)

Computational: Adobe PhotoShop (proficient), CLI applications (BLAST, MSA), data clustering (HCA, LDA), data mining, factorial design of experiment (2-level factorial, Plackett-Burman, Taguchi), multivariate statistical analyses (PCA, PCR, CCA, MDS, FA), PCord5 analyses, response surface design of experiment (central composite, box-behnken)

Teaching

B.Sc. Thesis: Effects of hormones on the internal biomass distribution of plants growing in dense populations

Project co-supervisor
University of Copenhagen

02/2025 - 07/2025
Copenhagen, Denmark

Basic Plant Biology Course

Teaching assistant
University of Copenhagen

12/2024
Copenhagen, Denmark

Biochemistry II Course

Teaching assistant
University of Copenhagen

12/2024
Copenhagen, Denmark

Project in Experimental Molecular Biology (PEMB)

Project co-supervisor
University of Copenhagen

04/2024 – 07/2024
Copenhagen, Denmark

BE556 Nanotoxicology

Teaching assistant
Izmir Institute of Technology

Autumn 2022
Izmir, Turkey