

Dr. Daan Weits
Utrecht University

CURRENT POSITION(S)

2021 - Assistant Professor
Faculty of Science, Department of Biology, Utrecht University, the Netherlands
Research interests: Understanding the role of hypoxic niches and oxygen sensing in developmental processes, building oxygen biosensors, measuring oxygen levels in small tissues (mainly meristems).

PREVIOUS POSITIONS

2018 – 2021 Assistant Professor
Scuola Sant'Anna for advanced studies Pisa, Italy
2015 – 2018 Postdoctoral fellow
Department of Biology, RWTH Aachen, Germany
The main outcome of my Postdocs is the discovery that an endogenous hypoxic niche encloses the shoot apical meristem and regulates its activity
2015 – 2015 Postdoctoral fellow
Scuola Sant'Anna for advanced studies Pisa, Italy
2012 - 2015 PhD (binational)
Max Planck Institute for molecular plant physiology
During my PhD project, I contributed to the plant oxygen sensing field by discovering the enzymes that selectively oxidize the ERF-VII transcription factors. These enzymes have since been recognized as de facto oxygen sensors.

RECENT PUBLICATIONS

Flooding stress and responses to hypoxia in plants.
Jiménez JC, Muströph A, Pedersen O, Weits DA, Schmidt-Schippers R.
Funct Plant Biol. 2024 51:FP24061 doi: 10.1071/FP24061.

Mechanodetection of neighbor plants elicits adaptive leaf movements through calcium dynamics.
Pantazopoulou CK, Buti S, Nguyen CT, Oskam L, Weits DA, Farmer EE, Kajala K, Pierik R.
Nat Commun. 2023 14(1):5827 doi: 10.1038/s41467-023-41530-0.

Dim artificial light at night alters gene expression rhythms and growth in a key seagrass species (*Posidonia oceanica*).

Dalle Carbonare L, Basile A, Rindi L, Bulleri F, Hamedeh H, Iacopino S, Shukla V, Weits DA, Lombardi L, Sbrana A, Benedetti-Cecchi L, Giuntoli B, Licausi F, Maggi E.
Sci Rep. 2023 13(1):10620 doi: 10.1038/s41598-023-37261-3.

Target of rapamycin signaling couples energy to oxygen sensing to modulate hypoxic gene expression in *Arabidopsis*.

Kunkowska AB, Fontana F, Betti F, Soeur R, Beckers GJM, Meyer C, De Jaeger G, Weits DA, Loreti E, Perata P.
Proc Natl Acad Sci U S A. 2023 120(3):e2212474120. doi: 10.1073/pnas.2212474120.

Acquisition of hypoxia inducibility by oxygen sensing N-terminal cysteine oxidase in spermatophytes.

Weits DA, Zhou L, Giuntoli B, Carbonare LD, Iacopino S, Piccinini L, Lombardi L, Shukla V, Bui LT, Novi G, van Dongen JT, Licausi F.
Plant Cell Environ. 2023 46(1):322-338. doi: 10.1111/pce.14440

Exogenous miRNAs induce post-transcriptional gene silencing in plants.

Betti F, Ladera-Carmona MJ, Weits DA, Ferri G, Iacopino S, Novi G, Svezia B, Kunkowska AB, Santaniello A, Piaggese A, Loreti E, Perata P.

Nat Plants. 2021 (10):1379-1388. doi: 10.1038/s41477-021-01005-w.

In Vivo Imaging of Plant Oxygen Levels.

Weits DA.

Plant Cell Physiol. 2021 62(8):1251-1258. doi: 10.1093/pcp/pcab039.